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ABSTRACT

Major issues facing higher education in Michigan and future trends and demographics are addressed in this 1984 progress report. Attention is directed to the following issues: coordination and communication between educational sectors, particularly regarding admissions standards; precollegiate education; the quality of undergraduate education; tuition at state institutions; the level and mix of institutional and student financial aid programs; the amount of revenue needed to maximize affordability and access; improving support services, programs, and policies to promote access of women, minorities, handicapped persons, and adult learners; occupational supply and demand; the distribution of programs across all degree and course levels; ways in which business/education/government linkages can be facilitated and the role of higher education in promoting Michigan's economic development; state funding for higher education; and roles and missions of each institution and sector. Three critical system issues are also addressed: establishment of a comprehensive statewide uniform database for higher education, the development of a strategic planning mechanism, and development of strategies to reduce and refocus the system. Economic trends, enrollment projections, economic assumptions, and trends in state spending are reviewed. The executive order establishing the Governor's Commission is included. (SW)

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AGENDA FOR DISCUSSION:

MIDYEAR PROGRESS REPORT

OF

THE GOVERNOR'S
COMMISSION ON THE FUTURE OF HIGHER EDUCATION IN MICHIGAN

April 4, 1984

James K. Robinson
Chairman

HE 017 182

U.S. DEPARTMENT OF EDUCATION
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STATE OF MICHIGAN

JAMES J. BLANCHARD, Governor

COMMISSION ON THE FUTURE OF HIGHER EDUCATION

North Ottawa Building, Box 30026, Lansing, Michigan 48909

517-373-4565

April 4, 1984

The Honorable James J. Blanchard
Governor of Michigan
State Capital, Michigan 48901

Dear Governor Blanchard:

Pursuant to the mandate of Executive Order 1983-11, I am pleased to transmit herewith Agenda for Discussion: Midyear Progress Report of the Commission on the Future of Higher Education in Michigan. Your challenge to us in creating the Commission has resulted in one of the most comprehensive efforts in the nation to ensure that our state sustains a quality system which can meet the needs of our citizens and is responsive to the world economy in which we must compete.

This document, in its philosophy and focus, is premised upon the Commission's belief that the long-term well-being of Michigan and the future of our higher education system are inextricably intertwined. By refining students' intellectual skills, by assisting individuals in preparing for public and private employment, by encouraging citizens to contribute to the vitality of our political fabric and by conducting vital research and public service, higher education functions in close partnership with all sectors of our state. Thus, preserving and enhancing the quality of the system is essential.

The last gubernatorial commission on higher education completed its work a decade ago. In the years since the existence of that earlier commission, individual institutions have been responding to a series of disorienting phenomena: depressed state and national economies, unstable revenues, fluctuating enrollments and population demographics, and a growing public demand for accountability. This Commission's existence signals the need to respond to a single certainty: dramatic patterns of change will prevail into the 21st century and Michigan higher education must be prepared to respond.

The challenges facing the system require that Michigan's higher education policy-makers adopt a concern for the overall well-being of the state and its citizens. Parochial wants and interests can no longer be preeminent, while strategic goals play a secondary role. Thus, working together, the Commission is approaching its task with the "toughness and imagination" you urged in your State of the State message this year.

This document represents months of careful research and intense work. We believe the information it contains will benefit you, the citizens of Michigan and higher education leaders as we collectively grapple with questions about the future of the system.

I would be pleased to discuss these findings with you and look forward to working with you to ensure that the implementation of the Commission's final recommendations occurs with vision and consensus.

Sincerely,

James K. Robinson
Chairperson

cc: State Board of Education

STATE OF MICHIGAN

Executive Office ★ Lansing

EXECUTIVE ORDER

1983-11

ESTABLISHMENT OF THE COMMISSION
ON THE FUTURE OF HIGHER EDUCATION

WHEREAS, accelerated economic change has resulted in a need for new and different skill requirements and research, while limited financial resources and population patterns that appear to be shifting have reduced the ability of Michigan's higher education institutions to respond to the many needs of our state; and

WHEREAS, there is a consensus that higher education is vital to our future and to Michigan being a world class center of business, industry, commerce, trade, culture and environmental richness; and

WHEREAS, there has been considerable discussion among Michigan citizens regarding the need for a reexamination of our higher education system and a reevaluation of institutional missions focused on Michigan's future needs;

NOW, THEREFORE, I, JAMES J. BLANCHARD, Governor of the State of Michigan, pursuant to the authority vested in me by the Michigan Constitution of 1963 in Article V, Section 4, do hereby order the establishment of the Commission on the Future of Higher Education within the Executive Office of the Governor.

The Commission shall have the following duties and responsibilities:

1. Recommend future needs for higher education in Michigan. The focus should be on the broad goals of the revitalization of Michigan while maintaining educational excellence. These recommendations should include statements about quality, diversity, access, affordability, institutional missions and program offerings. The survey should include the 15 public baccalaureate colleges and universities, the 29 community and junior colleges, as well as their interaction with the 56 independent colleges and universities.

2. Consider the areas of research that should receive priority support in a time of diminished resources and recommend means for financing these priorities.

3. Assess the expanded public service role these institutions can play in stimulating economic development, augmenting continuing education and cultural enrichment and improving the quality of life in all sectors of our state.

4. Explore all feasible options for achieving the recommended future goals in higher education while maintaining cost efficient centers of advanced learning which make maximum use of existing facilities and talent resources.

STATE OF MICHIGAN

Executive Office ★ Lansing

5. Compare recommended objectives and requirements to those of the present system of higher education; examine the current configurations of students, faculty, programs, material resources, and facilities to determine the capacity of the present system to achieve these new objectives; and ascertain the recommended changes which should be made based on the Commission's stated goals.

6. Seek advice from all sectors of the higher education community including students and consult with members of the Michigan Legislature.

7. Develop recommendations for future state policy together with guidelines for implementation, including proposed legislation and budget needs which address priorities and investment requirements.

The Commission on the Future of Higher Education shall present a preliminary report, not later than March 30, 1984, and a final report, not later than October 1, 1984, to the Governor and the State Board of Education, embodying recommendations related to all of the duties and responsibilities to which it has been assigned by this order.

All state departments and agencies shall cooperate with the Commission in in the performance of its responsibilities. The departments shall make every effort to avail the Commission of staff and other means of support to assist in the performance of the Commission's duties.

Given under my hand and the Great Seal of the State of Michigan this 19th day of September in the Year of Our Lord, One Thousand Nine Hundred Eighty-Three, and of the Commonwealth, One Hundred Forty-Seven.

James J. Blanchard
GOVERNOR

BY THE GOVERNOR:

Richard H. Austin
SECRETARY OF STATE

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EXECUTIVE SUMMARY
AGENDA FOR DISCUSSION: MIDYEAR PROGRESS REPORT OF THE GOVERNOR'S COMMISSION ON THE FUTURE OF HIGHER EDUCATION IN MICHIGAN

April 4, 1984

Governor James J. Blanchard, in creating the Commission on the Future of Higher Education, noted that higher education is vital to Michigan as a "world class center of business, industry, commerce, trade, culture and environmental richness" and charged the Commission to conduct a "comprehensive and coordinated study of Michigan's system of higher education and its role in contributing to our revitalization and quality of life."

The higher education system in Michigan is one of our greatest assets. Clearly, the spectrum of Michigan institutions evolved over the last century and a half has come to be viewed as one of the premier systems in the nation. It has been distinguished in producing competent graduates at all levels, developing recognized research and public service efforts and meeting the needs of the industrial age in this state and the nation.

But today that great system is in jeopardy. Restricted and unstable funding, fluctuating enrollment patterns and a growing demand for public accountability in the last decade have had a significant effect on the ability of Michigan's higher education institutions to sustain the quality to which it has long been committed. A comprehensive effort is needed to ensure that this great system is sustained and enhanced.

In responding to its charge, the Commission examined quantitative trends including demographics, economics, appropriations and enrollments and focused on four fundamental policy questions:

- How can higher education become more affordable and accessible?
- How can higher education maintain diversity and reduce duplication?
- How can higher education contribute to Michigan's economic revitalization?
- How can the quality of higher education be enhanced?

It is the Commission's conclusion after examining these data and issues that the higher education system as a whole must be more clearly focused to ensure quality, access and effective use of resources.

In examining the future trends and demographics, the Commission found a series of phenomena that will impact higher education including: (1) a

need to increase technological and information skills for all levels of employment; (2) a loss of industrial sector jobs resulting in significant retraining and research needs; (3) greater numbers of jobs in the service sector and self-employment; (4) large numbers of adults are likely to be seeking access to instruction.

This shift in education needs will be accompanied by an enrollment decline. It is predicted that at least a 10 percent overall drop in enrollments will occur by the 1990s with the greatest reduction occurring in public baccalaureate institutions. This projection optimistically assumes that aggressive strategies will be pursued to recruit and retain students at all levels.

Economic resources are also likely to be restricted for higher education in the foreseeable future. The dramatic growth of available funds realized in the 1960s and early 1970s is at an end even if some actions are taken to augment revenues through both public and private sources.

Thus, a system that has been predicated for at least the last four decades on growing revenues, increased enrollments and the basic needs of an industrial state must act soon to shift its focus and basic assumptions. Michigan and all its citizens must execute a transition to a new technological age and a responsive, accessible quality system of higher education is fundamental to achieving that goal.

CRITICAL ISSUES FACING HIGHER EDUCATION

The Commission found that a thorough review of the contemporary issues facing higher education was needed to respond to the Governor's charge to reexamine the entire higher education system and recommend future needs. Failure to respond to these critical issues will leave the system at real risk of slipping into mediocrity. In this process, the Commission sought information and advice from a broad spectrum of policymakers, institutional and association leaders, scholars and consultants regarding the fundamental policy questions. Given this input, the Commission intends to explore the development of specific recommendations for the final report in the following areas:

* Precollegiate instruction. Initially, the caliber of higher education depends on strong and challenging precollegiate instruction. Therefore, the Commission urges actions to implement the State Board of Education's Blueprint for Action recommendations in the following areas: (1) improving coordination and communication between educational sectors, particularly regarding admissions standards; (2) implementing the Mason-Miller Report regarding precollegiate preparation of minorities, females and handicappers; (3) adjusting high school graduation requirements and (4) strengthening the teaching profession.

* Quality undergraduate education. Student instruction is the primary mission of higher education and the quality of the system is closely associated with teaching, learning and educational interactions between students and faculty. In order to enhance this process at all institutions, the Commission will examine the potential usefulness of student competency tests, examine core curriculum requirements to ensure a balance of basic

skills, arts, humanities and career-oriented courses, consider means to better attract, support and utilize quality faculty, review technology and library resources and consider the needs for graduate instruction.

* Affordability. Michigan's average tuition rates are among the highest in the nation and the unmet need for student financial aid exceeds $70 million. In order to find options to make postsecondary education affordable for all students, the Commission will be examining the level and mix of institutional and student aid programs, and the amount of revenue needed to maximize affordability and access.

* Equity of access. Full access to education for all citizens regardless of race, sex, age, ethnicity or handicap has long been a fundamental goal in Michigan. Yet barriers to full participation still exist. Therefore, options will be explored to enhance appropriate support services, expand hiring practices and develop model institutional programs and policies regarding women, minorities, handicappers and adult learners.

* Occupational supply and demand. To make the best use of the state's human and fiscal resources, an examination of occupational supply/demand data is needed. The Commission intends to analyze the available information for its future planning and information dissemination implications.

* Program distribution. The distribution of programs across all degree and course levels represents a substantial commitment of state resources. The Commission has found that given restricted state dollars and considering projected enrollment and demographic trends, the logical conclusion is that the system is programmatically overextended and cannot be sustained at current levels. Therefore, the Commission recommends that all postsecondary institutions observe an immediate moratorium on the implementation of significant new programs until an effective statewide review process has been implemented. The Commission further proposes to assess the adequacy of existing program configurations, examine options for future program review and authorization, and explore the expansion of resource sharing endeavors such as telecommunications networks, regional consortia and interinstitutional program agreements.

* Economic development and research. Higher education can serve an important role in Michigan's economic development by conducting "cutting edge" research leading to spinoff industries, sustaining a well-educated work force and initiating responsive job training programs. In order to support these efforts, the Commission will examine ways in which business/education/government linkages can be facilitated and strengthened; priority needs for research facilities, equipment and human resources can be met, and job training and retraining programs can be enhanced.

* Finance and capital outlay. State aid for public community colleges and colleges and universities has declined in constant dollars over the past decade. The current method of funding individual institutions also fails to account for enrollment changes, differences in program costs and different educational roles. Further, there is considerable information to

indicate that institutions have deferred facility maintenance and equipment projects with serious consequences. The institutions also have a backlog of more than $1 billion in capital outlay requests. The Commission intends to explore objective data and make recommendations regarding levels of support in general funding, capital outlay, maintenance and equipment and relating those funding recommendations to institutional roles and missions and enrollments.

* Roles and missions. The Commission has found that clearly defined roles and missions must be developed for each institution and sector to more effectively respond to future needs. However, current institutional role and mission statements do not lend themselves to a consideration of statewide policy questions. Therefore, the Commission will explore the development of a classification framework or taxonomy of institutions inorder to make recommendations regarding funding, programming and interinstitutional and intersectional cooperation.

SYSTEMS ISSUES

In its deliberations on this wide range of issues, the Commission has found several common threads running throughout. Regardless of the issue discussed, the same shortcomings to further planning for the future of a quality system are clear. Thus, the Commission intends to focus specific attention on three critical concerns: (1) the immediate development of a comprehensive statewide uniform data base for higher education; (2) the development of a strategic planning mechanism to coordinate the efforts of the governing boards, the Legislature, and the Executive branch and other higher education leaders and expand cooperative efforts between institutions; (3) strategies for effectively downsizing and refocusing the system in order to realize the maximum use of valuable human and fiscal resources.

CONCLUSION

The people of Michigan deserve an assurance that the state's resources are being utilized effectively to maintain the best possible system.

A thorough discussion of the entire agenda profiled in this report is necessary to achieve this objective. Such a discussion can only be accomplished if those concerned about the system set aside their parochial interests and consider the purposes of higher education for all the people of this state. Working together, a consensus can be developed to chart the way to the 21st century for one of Michigan's most valuable resources. Our great state and our people deserve nothing less.

INTRODUCTION

Methodology

This report satisfies the mandate contained in Executive Order 1983-11 which required presentation of a preliminary report by March 30, 1984. Release of this report also closes out the first of three phases of Commission activity.

Phase One emphasized exposure to a comprehensive information base, using background papers and the appearance of experts at monthly Commission meetings as the primary data transmission vehicles. This initial work period terminates with the synthesis and distribution of findings in this report.

Phase Two of the Commission's activity will be externally oriented. It will commence with the initiation of public forums and numerous speaking engagements focused on the content of the midyear progress report. By reserving seven weeks for listening and interacting, the Commission hopes to ensure that its final strategy represents a true public consensus--an agreement about the problems, projections and policy alternatives most relevant to higher education.

In accordance with the schedule presented below, groups of Commissioners will preside over public forums during the first week in May. All citizens interested in appearing before the Commission must submit five typed copies of their remarks for review by Commissioners in attendance. Verbal testimony will be limited to five minutes.

• April 30	Traverse City 1:00-4:00 p.m.	Governmental Center, County Commission Chamber
• May 1	Detroit 1:00-4:00 p.m.	Detroit Public Library, Explorer's Room
• May 2	Saginaw 1:00-4:00 p.m.	Saginaw City Hall, City Council Chamber
• May 3	Lansing 1:00-4:00 p.m.	East Lansing Public Library
• May 4	Grand Rapids 1:00-4:00 p.m.	Grand Rapids City Hall, County Commission Chamber
	Marquette 1:00-4:00 p.m.	Marquette County Courthouse Annex, County Commission Chamber

During Phase Three, the Commission will explore the cost and feasibility of competing policy alternatives, examine the plausibility of data projections and formulate proposed recommendations for the October report.

Each "issue for further investigation" listed in Section II of this report will be carefully explored by the Commission during Phase Three. Only those issues which, in the last analysis, meet the test of feasibility and affordability will be accompanied by recommendations in the October report. By screening proposed policy alternatives based on their costs, their benefits, their implementation potential and their urgency, the Commission believes its priority recommendations will earn serious consideration and support.

Framework for the Report

In an initial document entitled "Trends, Issues and Decisions Facing Michigan's Higher Education System," the Commission's overall charge was presented in terms of a "matrix" metaphor. This metaphor was consciously chosen to illustrate the multi-dimensional nature of decisions facing the Commission. The matrix described in this earlier paper included two types of information:

- Cumulative data on quantitative trends, such as demographics, economics, appropriations and enrollments; and
- Information on four public policy issues relative to which the Commission must establish credible, workable positions.

In that earlier document it was pointed out that, by making decisions about each trend and issue in the matrix, the Commission would ultimately arrive at final recommendations in three overriding areas:

- Specific public policy goals which will lead the higher education system to satisfy future state needs regarding quality, access and effective use of resources.
- Ways to finance the higher education system.
- Ways to make the higher education system more accountable and efficient in expending public funds.

This progress report expands the format of the earlier document in two important ways. First, in this report, public policy issues are accompanied by preliminary findings, future investigation plans and recommendations. After six months of work, the Commission is ready to focus its energy on resolving, rather than simply posing, policy questions. Second, this report does more than summarize trend information from past years. Instead, because the state must cease its reliance on short-acting palliatives, this report translates past trends into future forecasts. In the belief that band-aid responses must no longer characterize Michigan's planning processes, this Commission will put the greatest stock in comprehensive, long-term possibilities.

Michigan's Higher Education System: Major Parameters

Higher education in Michigan is a very large and complex enterprise. A listing of some facts about the system demonstrates its size, scope and the magnitude of the challenge faced by the Commission:

Institutions. One hundred public and private collegiate institutions operate in Michigan--56 private schools, 29 public community colleges and 15 public colleges and universities. Included among these institutions are nine comprehensive universities, 37 primarily liberal arts colleges, four institutions which concentrate on technological programs, four medical schools, one school of optometry, two dental schools, five law schools and one school of veterinary medicine.

Revenues. Two billion dollars are raised annually by the system for general operations. About $1 billion of this amount is provided by the state. The state's contribution to higher education is roughly equivalent to 19 percent of the state's total fiscal year 1985 general fund budget. For fiscal year 1985, the Governor is recommending $780.9 million for public colleges and universities, $159.3 million for community colleges, and $53.7 million for grants which primarily are awarded to private institutions and their students.

Enrollments. In the fall of 1983, student enrollments totaled 517,250. This aggregate enrollment level, nearly as high as peak 1980 enrollments, should not mask the fact that private and community colleges have gained students and public colleges and universities have lost enrollments. In the fall of 1983, 226,999 students enrolled in public colleges, 217,230 in community colleges and 73,021 in independent colleges. Fifty-five of the institutions have enrollments under 1,500 (eleven community colleges and forty-four independent colleges); eleven institutions have enrollments over 10,000 (four community colleges and seven public colleges).

Degree Programs. Institutions operate a total of 1,400 degree programs; public institutions operate 85 percent of this total. A much larger number of bachelor and associate degree and certificate programs are also operated by the schools.

Physical Plant. Six and one-half billion billion dollars would would be required to replace the system's facilities.

Service. In addition to the three primary missions of higher education--instruction, research and public service--institutions are also involved in museums, cooperative extension programs, and public radio and television stations.

Policy Guidelines

In order to shepherd its public policy deliberations in desired directions, the Commission adopted guidelines in November, 1983. These guidelines represent fundamental Commission expectations of the higher education system. They have served to frame information in each section of this progress report and will continue to play a central role in final deliberations.

INSTITUTIONAL MISSIONS AND SUPPORT

- The goal of Michigan higher education is to prepare individuals to assume productive employment, to lead satisfying lives and to be effective citizens and leaders.
- Clearly defined roles and missions should be developed for each public institution of higher education and should relate to the needs of the state as a whole.
- General Fund, capital outlay, maintenance and equipment funding provisions should be objectively established in view of clearly defined institutional roles and missions.
- Strategic mechanisms should be developed to increase cooperation between individual higher education institutions and to maximize utilization of the state's resources.
- The strength of Michigan's multifaceted system of public higher education institutions should be recognized and retained.
- Efforts should be made at both the state and institutional levels to broaden the base of support for Michigan's postsecondary education enterprise.

INSTITUTIONAL ACTIVITIES

- Academic excellence and instructional program quality should be the fundamental goals of each publicly-supported institution of postsecondary education.
- Retention and promotion of quality research (basic, pure and applied) should be encouraged as a priority goal at each publicly-supported Michigan postsecondary institution which has this function as part of its legitimate role and mission.
- Each publicly-supported Michigan postsecondary institution should pursue public service activities designed to meet the unique needs of its constituency and community.
- Contributions to both the quality of life and social understanding should be fundamental to each institution.

STUDENT ACCESS

- Postsecondary education should not be denied to students because of a lack of financial resources.
- Postsecondary education should not be denied to students because of race, sex, age, ethnicity, handicap or geographic location.
- Developmental programs and relevant support services should be available to enhance the likelihood of student success in higher education.

ECONOMIC DEVELOPMENT

- Creative efforts should be made both at the state and institutional levels to facilitate interaction between the higher education community, the private sector and government to enhance economic development within the state.
- Job training and retraining services should be fully integrated into the programming of the appropriate sectors within Michigan's higher education enterprise.
- Enhancing the strength and national standing of Michigan's research institutions should be a priority.
- Academic program development and retention at each publicly-supported Michigan institution of postsecondary education should be responsive to concerns related to both short- and long-range occupational supply and demand.

Section One:

BASIC ASSUMPTIONS

FUTURE TRENDS AND ENROLLMENT ASSUMPTIONS

Introduction

Researchers, planners and noted scholars have clearly delineated the major factors that will shape and change American society over the next twenty years. Many of these changes are already underway and affect every segment of the nation--the economic base, composition of the population, nature of the work force and even the operation of the work place.

Economic and Employment Trends

Since 1950, there has been a gradual shift in the economic base from industry to information, which will accelerate over the next fifteen years. This shift will significantly change the country's overall employment picture in ways which are summarized below.

- Many jobs in the industrial sector will be lost altogether. Others will require skills different from those demanded today. Similar changes will occur in the information and agricultural sectors as advances in technology are made.

- The service sector will become the employer of last resort for many displaced workers. It is the only employment sector expected to increase over the next fifteen years.

- The number of people who are self-employed is also expected to grow, with information entrepreneurs (consultants, technical writers and programmers) making up the greatest percentage of the new businesses. Self-employment and home computer use will increase the amount of work done at home.

- High tech businesses are likely to locate in places able to attract trained workers--high tech's most valuable resource. To date such businesses have chosen to locate in exurbia (those areas 30 to 100 miles from large urban centers.)

- The number of entry level workers will decline during the next fifteen years due to low birthrates in the 1960s and early 1970s. This shortage is expected to be made up by women (who will continue to join the work force in steady numbers), older workers and immigrants.

- As the baby boom generation matures, the numbers of midcareer workers will sharply increase. This growth comes at a time when fewer midlevel jobs are available, due to both a streamlining in the management ranks and a greater need for managers with special skills.

Education Trends

The number of workers requiring retraining either to retain their present job, qualify for a new one or prepare for advancement will make education a very competitive business.

- The key students in this education effort will be adults. In addition, This shift to adult students comes at a time when declining birthrates have resulted in a significant reduction in the numbers of children attending school. In Michigan, primary and secondary school enrollment declined 24.8 percent, or 531,797 students, during the period from 1972 to 1983. Therefore, adult students will comprise a large proportion of education consumers for years to come.

- The concept of a classroom will be extended to include private meeting facilities, homes with video machines and computers, as well as the traditional school environment.

Analysis of current enrollment trends shows at the national level that a change in the composition of the typical student body is already underway. This changing student profile finds its source in the demographic trends summarized below.

- Parttime and older students, women and minorities comprise a growing percentage of those attending college with women now comprising a majority of all students and the number of nontraditional students (25 and older) nearly doubling in the past ten years. This increase in adult learners will only partially replace the enrollment drop in traditional students.

- A new baby boom, now underway, is expected to peak by 1988. However, this boom will not translate into increased higher education enrollments until after the turn of the century.

- In the years ahead, minorities will become a larger percentage of the population. Minority birthrates have remained constant, contary to the decline in non-minority rates.

Higher Education Enrollments

Some of these trends have already been reflected in Michigan institutions.From 1980 to 1983 fall headcount enrollments in Michigan changed as follows:

- Overall headcount declined by .25 percent.
- Public four-year enrollments declined by 6.55 percent overall. Enrollments fluctuated from institution to institution within a range of minus 14.3 percent to plus 29.41 percent.
- Community college enrollments grew by 3.70 percent overall. Again, enrollments fluctuated from institution to institution within a range of minus 20.41 percent to plus 41.59 percent.
- Enrollments in independent institutions grew by 10.4 percent overall.

Table 1
FALL HEADCOUNT ENROLLMENTS,
MICHIGAN HIGHER EDUCATION INSTITUTIONS

TYPE OF INSTITUTION	NUMBER	1980	1981	1982	1983	ONE YEAR PERCENT CHANGE	FOUR YEAR PERCENT CHANGE
PUBLIC FOUR YEAR COLLEGES & UNIVERSITIES	15	242907	235027	226385	226999	.27	-6.55
PUBLIC TWO YEAR COMMUNITY COLLEGES	29	209481	211964	213204	217230	1.89	3.70
INDEPENDENT COLLEGES AND UNIVERSITIES	56	66144	68406	69807	73089	4.70	10.50
TOTALS	100	518532	515397	509396	517318	1.55	-.23

MICHIGAN DEPARTMENT OF EDUCATION
HIGHER EDUCATION MANAGEMENT SERVICES
SOURCE: HEGIS
12/14/83

Community colleges have benefited the most from the increase in nontraditional students. The proportion of students enrolled in these institutions increased from 32 percent in 1970 to 42 percent in 1983, while public four-year schools declined from 55 percent to 44 percent. Private colleges maintained a consistent 12-14 percent share during the same period.

The demographic, economic and enrollment trends projected for the next fifteen years will have an impact on higher education which is discussed below.

Changing Student Needs. Increased participation of women, minorities and older students will necessitate many adjustments for institutions of higher education, both four-year and two-year institutions. Some of these changes are already being made in response to shifting enrollments, but the need for the following accommodations will accelerate:

- Offering classes and complete degree programs in the evenings and on weekends.
- Offering classes in cities and towns, often using private meeting facilities.
- Supplementing in-class work with greater use of video learning and more sophisticated programmed instruction for use on home computers.
- Providing remedial and developmental programs when K-12 graduation requirements do not correlate with the skills and competencies needed for advanced learning.

Changing Student Goals. Increased diversity in the student body will mean changes in the goals and objectives of individual students relative to their education.

- The traditional student seeking an undergraduate degree will still be present on campus, as will returning students in need of a few credits to finish their degrees. One difference may be that mature and returning students will expect acknowledgement of their life experiences within the degree structure.
- Other returning students will not be planning to obtain a degree, but rather need a specific group of courses to upgrade their skills. This group will expect such classes to be available without unrelated prerequisites or class status requirements.
- College graduates may need to return for additional coursework to refresh their skills or to learn new skills if they have been displaced from the job for which they trained for in college. These students are also likely to be more interested in a specific course than a degree program.

Lifelong Learning. The traditional, degree-track student will bring a different learning philosophy to campus. With rapidly changing technologies, future graduates will be required to continue learning and updating skills throughout their careers.

This lifelong learning emphasis will provide a twofold challenge for higher education.

- Students will have to be trained to learn new information rapidly and to do so on an ongoing basis.
- Higher education will need to establish a vehicle whereby graduates can be routinely updated on advancements in their fields through newsletters, inservice seminars and other communication methods.

Competition for Students. The increase in returning, older students cannot fully replace the numbers of traditional age students (18-24) lost due to the shrinking population of that age group. Increased enrollment of nontraditional students may moderate the impact of this loss somewhat for institutions of higher education, but overall college enrollments must be expected to decline during the next fifteen years.

When added to the availability of new video and computer learning systems which make it possible to take courses from any institution or private enterprise that make them available, it becomes clear that competition for students will become one of the major challenges to higher education administrators over the next fifteen years. This competition will require aggressive strategies to both recruit and retain students. That process must begin now.

A large body of retraining will be done by the private sector. Businesses will be providing on-the-job training for their employees, while other entrepreneurs will be developing specialized training programs for sale to businesses and individuals. Higher education institutions could capitalize on their already existing expertise by forming training partnerships with the private sector, similar to those already in place for research.

ENROLLMENT PROJECTIONS

Projecting enrollments for higher education is more complicated than projecting general population trends or primary and secondary school enrollments due to the number of complicated factors which must be considered (such as affordability, access, personal goals, job requirements and other opportunities available to the student).

Changes in the age mix and attendance patterns of students create a need for enrollment measures to be figured in both headcount and equated terms. Headcount measures reflect the number of students enrolled regardless of the credit hours they take while fiscal year equated student (FYES) measures are calculated so that a fixed number of credit hours (31 semester hours in Michigan) equal one student. Therefore, a part-time student with 15.5 credits annually would count as one headcount student and one-half of a fiscal year equated student. These differences become

significant for planning purposes as increasing numbers of part-time students participate in the higher education system.

The National Center for Education Statistics has made some intermediate national projections for four year and two-year institutions:

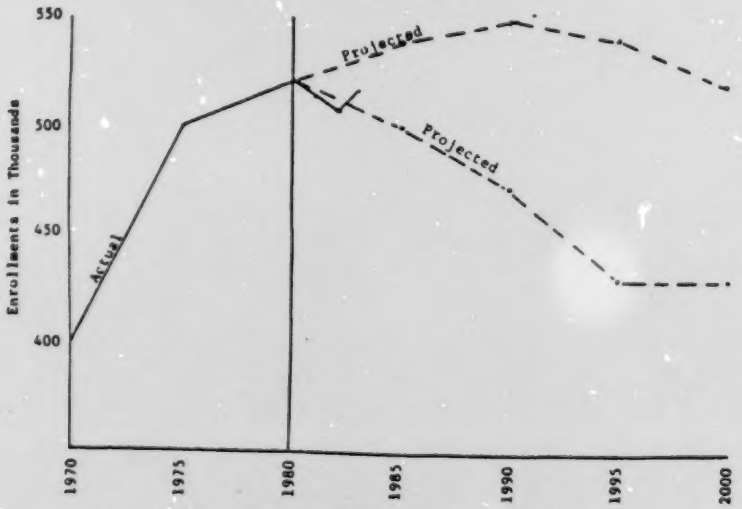
- Four-year institutions will likely see a headcount enrollment decline of 6 percent (in equated students this is projected to be an 8 percent decline.)
- Two-year institutions will likely increase 10 percent in headcount (this will likely translate to 7 percent in equated students.)

Although it is possible for future Michigan enrollments to parallel national levels, the rate of growth in the state has historically lagged behind national enrollment levels.

With the assistance of a work group of experts in the field of postsecondary enrollments, the Commission reviewed the most recent projections for fall headcount enrollment in Michigan. Almost all projections predicted a low point in 1995 followed by a slight increase by the year 2000.

Table 2 documents the range of projections recognized by the experts consulted as to the most appropriate range of projections for consideration. This has been called the predominant range of projections. This recommended "predominant range" of figures eliminates high and low extremes from the professional projections that have been done for Michigan.

Table 2
THE PREDOMINANT RANGE OF PROJECTIONS IN FALL HEADCOUNT ENROLLMENTS IN MICHIGAN
(Enrollments in Thousands)



These projections vary significantly by type of institution. The predominant range for headcount enrollments by type of institution is as follows:

- Overall: between 434,000 and 519,000 in the year 2000, compared to 517,000 in 1983.
- Public four-year: between 193,000 and 229,000 in the year 2000, compared to 227,000 in 1983.
- Public two-year: between 140,000 and 185,000 in the year 2000, compared to 217,000 in 1983.
- Private: between 60,000 and 67,000 in the year 2000, compared to 73,000 in 1983.

These projections also reflect data four to five years old and do not adequately take into account the influx of nontraditional students. These projections also fail to include the racial composition of future enrollments. Current census data show that from 1960 to 1980 the number of white Michigan residents aged five and under decreased from 867,706 to 685,113 while the minority population under five increased from 107,441 to 132,698. In that age group minorities increased their proportion of the population from 11.1 percent to 19.4 percent.

It would be expected that the increased minority population would be reflected in greater enrollments of minority students particularly if aggressive recruitment efforts are undertaken.

Thus, while they are useful in general terms, Commission assumptions regarding older students and minorities necessarily were adjusted to include more recent enrollment trends.

Strategies for Affecting Enrollment Levels

The American Council on Education has identified twelve strategies which can be implemented by education policy makers to help positively affect future enrollments.

These strategies are outlined along with their projected impact by both headcount and equated measures. For instance, increasing enrollments of nontraditional students would add 859,000 nationally to the headcount but only 481,000 nationally in equated terms as most of these students would attend part time.

An individual enrollment may appear in more than one strategy. Thus, these, in some instances are duplicate counts, but give a reflection of the potential magnitude of the impact at the national level. Combining all of these strategies would only diminish the impact of enrollment declines and not totaly neutralize them. This is predicated on a base estimate national enrollment in 1990 of 10,810,000.

Table 3
AMERICAN COUNCIL ON EDUCATION
STRATEGIES TO AFFECT NATIONAL HIGHER EDUCATION ENROLLMENT LEVELS

- Increasing college-going rates of lower- and middle-income families through financial aid specifically targeted to certain income categories.

  566,000 (413,000 FTE)

- Increasing enrollments of non-traditional students (over 25 years of age) due to expanding non-traditional pool and a 1 percentage point increase in the college going rate.

  859,000 (481,000 FTE)

- Increasing enrollments of foreign students (double enrollments from 1980 to 1990).

  280,000 (204,000 FTE)

- Increasing high school graduation rates from 75 to 80 percent.

  83,000 (61,000 FTE)

- Increasing enrollment of minority youth. (Increase high school graduation rate from 69.8 to 80.0 percent.)

  102,000 (74,000 FTE)

- Increasing the college going rate of 18-24-year-olds from 25.3 to 27.3 percent.

  503,000 (367,000 FTE)

- Increasing retention rates at higher education level and attracting two-year graduates to four-year programs. Cut attrition by about 25 percent, attract 25 percent of those who complete 2 years into four-year programs.

  307,000 (225,000 FTE)

- Increasing participation rate of women 20-34 years of age to that for men (14.5 to 17.0 percent).

  1,230,000 (689,000 FTE)

- Increasing participation rate of men 35-64 to that for women (1.1 to 1.7 percent).

  314,000 (176,000 FTE)

- Increasing enrollments of graduate students. Growth from 1980 to 1990, but at a slower rate than previous decade.

  Public: 110,000 (62,000 FTE)
  Private: 68,000 (38,000 FTE)

- Increasing enrollments of employed people currently being served by industry. 2 percent of a potential 40 million now served by industry.

  800,000 (136,000 FTE)

- Increasing credentialing of high school graduates by testing. Increase rate from 7.6 to 9.6 percent of high school dropouts.

  22,000 (12,000 FTE)

In making enrollment projections for Michigan the Comission has assumed that efforts in all of these areas will be made by responsible policymakers. Thus, the projections reflect a "best case" situation. Without such actions being pursued, enrollment declines will be even greater.

ASSUMPTIONS

The question of change is not so much whether change is occurring, but rather how to meet the challenges accompanying that change. For Michigan, the long-term stability of the economy and future economic growth may well depend on the response to questions about change.

The particular challenge for higher education will be how to preserve its traditional functions in a way that recognizes the changes occurring in the market place.

Economic and Enrollment Assumptions. The Commission has adopted the following assumptions on which it will base its future deliberations.

1. **The future will require a transition in manufacturing from the older manual-machine production process to newer automated systems.**

2. **Mid-level jobs will continue to decline as the number of candidates for these positions rise, resulting in a greater concentration of workers in lower-level service jobs and a relatively small number in top-level positions.**

3. **A majority of the present workers are likely to need retraining to upgrade their skills for their current job, to learn new skills for another job or to qualify for upward mobility.**

4. **Rapidly changing technological requirements of jobs will demand frequent retraining, revising and upgrading of job skills.**

Demographic and Enrollment Assumptions. The enrollment assumptions that follow are based on the Michigan projection discussed earlier, adjusted to reflect the most recent enrollment trends. They also presume that aggressive strategies to recruit and retain students throughout the higher education system will be implemented.

1. **The student body of higher education institutions will continue to change with more parttime enrollments and an even greater increase in the proportion of nontraditional students (25 years old and older), women, minorities and handicappers.**

2. **An overall decline in headcount enrollment of 10 percent is the most realistic projection that can be made based on available data and present trends by 1990. This decline**

would bring total enrollment to 465,000 (assuming a greater participation level for nontraditional students). This projection does not consider such unknown factors as revisions in financial aid and drastic changes in tuition rates.

3. The projected enrollment decline will impact types of higher education institutions differently. Outlined below are headcount projections for each category of institution, recognizing that the experience of individual institutions may be significantly different. These estimates optimistically assume the state and all the institutions pursue the aggressive strategies discussed to recruit and retain students.

   - Public four-year institutions will likely experience the greatest decline with optimistic projections showing a 14 percent drop in enrollment by 1990 (to 193,000 students from the current 1983 level of 227,000.)

   - Community colleges are expected to stabilize and are not likely to decline to levels predicted in most previous projections. Currently, 217,230 students attend community colleges in Michigan.

   - Independent four-year institutions are expected to see some decline in enrollments (from 73,000 today to 60-67,000 students in the next decade.)

4. These enrollment changes require an ongoing effort to provide projections. In addition, some modifications must be made in the data collection format. An increasing number of parttime students will require a more accurate and consistent accounting of students on a credit hour rather than a headcount basis. Consistent and accurate data by age, sex, minority status and degree level will be necessary to derive an accurate profile of students and determine the potential effect of demographics on enrollments.

ECONOMIC ASSUMPTIONS

Findings

The future of higher education in Michigan will undeniably be affected by the future economy of the state and the nation.[1] History has proven the Michigan economy to be uniquely volatile among the fifty states because of a singular reliance on the domestic auto industry. As the fortunes of the domestic auto companies have changed, so, too, has the economic well-being of the state. Following are several indicators of the state's economic circumstances:

- Real per capita income is essentially the same as it was eleven years ago (1973).[2]
- The state unemployment rate has consistently been at double digit levels since 1980. Over the last ten years, the average unemployment rate in Michigan has been 11.0 percent, a full 3.3 percentage points higher than the average U.S. rate of 7.7 percent. At the peak of the recent recession, fully 665,050 individuals were unemployed, compared to 221,000 in 1973.[3]
- The number of new jobs added in the state fell 788,000 in the ten-year period from 1963 to 1973, to 99,000 from 1973 to 1983.[4]

Economic forces affect the well-being of higher education, both directly and indirectly. For example, the economy influences available educational revenues, the level of competition for state dollars, the demand for specific occupations and the supply of college graduates to fill those jobs. Each of these economic implications is discussed below.

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[1]The following section on economic conditions is based in large part on information provided to this Commission by Dr. Saul Hymans, Director of Research Seminar in Quantative Economics of The University of Michigan, and Ted Ferris, Director of the Senate Fiscal Agency.

[2]Source: Senate Fiscal Agency: The Michigan Economy and State Budget in Retrospect and Prospect. February 13, 1984.

[3]Ibid.

[4]Ibid.

PUBLIC REVENUE SOURCES

State Revenues

Economic factors profoundly affect the level of state resources available for education and other vital state services, as well as the allocation of those resources. In simple terms, state funding for higher education is drawn from state discretionary General Fund/General Purpose (GF/GP) revenues. The term discretionary means that these revenues are free from restrictions that predetermine how the funds are to be spent. The revenues support a variety of state programs and services, such as:

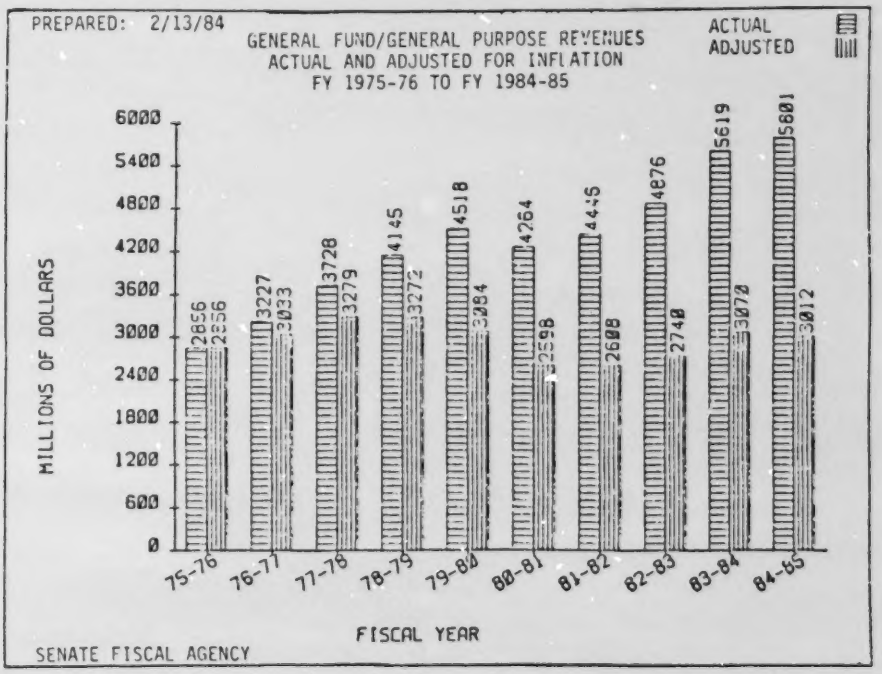
- State support for higher education, including financial aid to individuals and institutions, and state support for two- and four-year institutions.
- The state portion of public assistance, including Aid to Families with Dependent Children (both Unemployed and Regular), General Assistance and Medicaid.

GF/GP revenues are derived from a variety of sources, including the personal income tax, the sales tax and the single business tax.

The School Aid Fund provides support for K-12 education only, and is supplemented by state GF/GP revenues.

As Table 1 illustrates, state GF/GP, when adjusted for inflation, has remained relatively constant since FY 1975-76.

Table 1



Local Revenues

In addition to federal and state support and tuition, community colleges rely on local property tax revenues. These revenues are a function of the state equalized value (SEV) of property and the millage rate.

The statewide average millage rate for all purposes (public K-12 schools, intermediate school districts, community colleges and municipal functions) did not remain constant. Rather, the average millage rate in the state increased steadily from 34.22 mills in 1960 to 51.12 mills in 1975. It has remained relatively constant from 1975 to 1983, at between 53 and 54 mills.

The result of the rise in millage rates has been considerable public pressure to limit property tax increases, and a subsequent controversy over the prospect of shifting local responsibilities to the state income tax.

The Senate Fiscal Agency has compared Michigan to other states, in terms of the share of personal income spent on state and local taxes. Their figures show a relative increase in the local tax burden and a relative decrease in the state tax burden between fiscal year 1978 and fiscal year 1982.[5]

DEMAND ON STATE REVENUES

As greater and greater numbers of unemployed workers exhausted personal resources during the recent recession, the demand for many state services rapidly increased. From FY 1977-78 to FY 1982-3 the number of intact families (Aid to Families with Dependent Children--Unemployed) in need of public assistance grew by 350% from (13,691 to 46,472). General Assistance caseloads grew by over 219 percent (41,550 to 134,211). At the same time, the number of traditional public assistance cases, those on Aid to Families with Dependent Children--Regular, remained relatively constant. Medicaid expenditures jumped from $403.3 million to $622 million. Two-thirds of the burgeoning Medicaid expenditures provide medical care for the aged and chronically ill. The remaining one-third supports medical services for Aid to Families with Dependent Children (AFDC).

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[5]Measures of local taxes show Michigan moving from a rank of twentieth in FY 1977-78 to seventh in FY 1981-82. The ranking for state taxes showed Michigan moving from twenty-third to thirty-third over the same period.

State spending patterns for fiscal years 1968, 1973 and 1983 in the areas of social services, two- and four-year higher education institutions and K-12 education are compared in summary fashion below. In each case, two factors are juxtaposed: changes in state spending for a service and changes in the demand for that service.

- Social Services: State spending increased by 791.6 percent, with caseload growth of 583.3 percent for General Assistance, 2,377.1 percent for AFDC-Unemployed, and 350.8 for AFDC-Regular.

- Four-Year Institutions of Higher Education: State spending increased by 218.0 percent, while enrollments increased by only 14.2 percent.

- Two-year Institutions of Higher Education: Spending increased by 621.9 percent, while Fiscal Year Equated enrollments increased by only 157.1 percent.

- K-12 education: State spending increased by 154.6 percent, with enrollments actually declining by 16.2 percent.

Other pressures on available state revenues are summarized below.

- In times of recession, there are concommitant increases in the need for other services, such as mental and public health programs.

- Drastic reductions in federal funding--a reduction of 28.9 percent from FY 1980-81 to FY 1983-84--have resulted in state assumption of new responsibilities and services.

- In relatively good years, the state must make payments into the "Counter-Cyclical Budget and Economic Stabilization Fund," which helps to moderate variations in state general fund revenues from year to year. An economic trigger is used both to determine when payments are to be made and the amount of the payment. Although the state has not made any payment into the fund since FY 1978-79, estimates are that the required payment for fiscal years FY 1983-84 and FY 1984-85 could be substantial, as shown in Table 2.

Table 2[6]
COUNTER-CYCLICAL BUDGET AND ECONOMIC STABILIZATION FUND
(Dollars in Millions)

Fiscal Year	Senate Fiscal Agency	Department Management and Budget
1983-84	$ 51.7	$ 34.0
1984-85	$432.4	$270.0

TRENDS IN SPENDING

Over the past 20 years, there has been a perceptible spending shift from education to social services. State spending from all sources (including federal) for social services grew from 13.7 percent to 32.7 percent of the state budget from 1959-60 to 1981-82. Funding for all levels of education declined from 37.9 percent to 24.5 percent.[7] The decline in education funding was borne by the K-12 sector, not the higher education sector. In fact, funding for higher education in 1981-82 is 7.8 percent of state spending, the same proportion as in 1959-60.

The decline in state funding for K-12 education was, in large part, a result of increased property values. Under the state school aid formula, per pupil state aid declines as property value increases. Thus, state funding for K-12 education declined from 30.9 percent to 16.5 percent of the state budget while local property tax collections (for all purposes, including K-12) increased by about 508 percent.

The impact of state shifts away from educational spending and declining state support for K-12 education takes clearer focus when recent proposals to hold down tax rates are taken into account. Specifically, a "voters' choice" amendment to the state constitution will likely appear on the ballot in November 1984. If approved, this amendment would mandate a rollback of taxes to levels in effect prior to December 31, 1981, as well as requiring voter or legislative approval of new taxes or future tax increases. Higher education would be seriously affected by the estimated 17-18 percent reduction in state revenues this amendment would produce during fiscal years 1985 and 1986.

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[6]Differences in the Department of Management and Budget (DMB) and Senate Fiscal Agency (SFA) estimates are due to different assumptions on the economic health of the state. The SFA estimate is based on a more optimistic economic picture than the DMB estimate.

[7]Ibid.

OCCUPATIONAL SUPPLY AND DEMAND

The economies of the state and the nation have a profound influence on the number and type of jobs available for graduates of institutions of higher education. As the economy improves, the number of jobs increases; recessions reduce the number of available jobs.

The type of employment and job content (both of which influence student demand and curricula) have changed dramatically throughout the past two decades for both the nation and the state of Michigan. In this regard, there has been a significant shift from occupations related to manufacturing to those associated with information and service.

ENROLLMENTS

Economic conditions can also influence enrollments. For example, enrollment levels are negatively correlated with the number of available jobs. Abundant job openings have historically enticed individuals to forego higner education in favor of employment.[8] Conversely, a lack of available employment has provided incentives for the unemployed to turn to the postsecondary education system.

It should be noted that this historical pattern did not repeat itself in public four-year institutions during the recessionary years between 1979 and 1983. During that time, aggregate fall headcount enrollment for public four-year institutions declined, whereas fall headcount enrollment increased for both public two-year and private institutions.[9]

In determining the economic assumptions that will frame future deliberations, the Commission has taken all of the foregoing factors into account.

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[8]College Enrollment Trends: Testing the Conventional Wisdom Against the Facts, Carol Frances, American Council in Education (1980) p. 23.

[9]The source of fall headcount enrollment statistics is the Michigan Department of Eduction Higher Education Planning Unit.

ASSUMPTIONS

Projecting specific economic conditions is an imperfect science at best. While short-term (1-2 year) economic forecasts can be relatively precise and useful, there is no reliable way to predict how the national and state economies will perform through the year 2000. There are, however, certain historical trends and patterns that can provide a comprehensible framework for what might be expected. The Commission has formulated predictions based on these patterns.

1. State Revenues

In Michigan, several factors could potentially influence the level of available revenues:

- The existing constitutional amendment to limit state taxes and revenues (Article IX, S. 29), and prevailing political opinion, provide very real limits to the amount of additional taxes that might be levied to support new or expanded state activities or services, including education.

- The proposed "voters choice" amendment, if approved, could have a devastating effect on funding for higher education.

- The Counter-Cyclical Budget and Economic Stabilization Fund will continue to serve its purpose by banking some of the state GF/GP revenues generated in good years to moderate declines in bad economic years. As a result, expansion of state activities and services will be more limited than in the 1960s and most of the 1970s.

Therefore, in the short term, the Commission assumes that: (1) there are no new state initiatives to raise taxes, although in the long run, revenue enhancement initiatives may have to be undertaken to ensure the quality of higher education programs; (2) the proposed "voters choice" amendment is not approved in November, and (3) the state economy continues to recover.

The Commission, furthermore, anticipates that the short-term revenue outlook will be relatively stable, with available state revenue (constant dollars) remaining at levels consistent with current levels. The Commission assumes that revenues could fluctuate within the range of -3.5 percent to +3.5 percent annually during fiscal years 1986 and 1987.[10]

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[10]Presentation by Dr. Saul Hymans, December 5, 1983.

2. Local Property Tax Revenues

Between 1977 and 1982, the state equalized value of Michigan property grew an astounding 64.9 percent. Over that period, the statewide average millage rate began an unprecedented, albeit slow, decline from a high of 53.89 mills in 1977 to 52.71 in 1983. The result was an increase of 61.28 percent in tax collections over that six-year period.

The Commission believes that the recent decline in average millage rate is a significant trend that will limit the growth of property tax revenues available for community colleges. There may be increased public pressure to shift some or all of education financing to the state, potentially creating even greater demand on limited state resources.

3. Demands on Public Revenues

The Commission predicts that countervailing demands on state revenues will continue. Although current economic improvements may, to some extent, reduce the demand for services among the unemployed, relief from these pressures will probably be temporary. As Michigan makes its transition to a more diversified economy, cyclical recurrences can be expected.

Furthermore, the aging population of Michigan will likely present new and greater demands for state supported services. The Commission also expects continued presssure to expand and modify state funding for primary and secondary schools.

Absent any future change in course, the Commission believes that the state commitment to higher education will continue at the restoration level proposed by the Governor for FY 1984-85. Based on the foregoing state revenue assumptions, a short-term change of -3.5 percent to +3.5 percent annually in constant dollars could be expected for fiscal years 1986 and 1987.

These economic assumptions suggest that higher education in Michigan can anticipate and plan for the following:

- An end to the growth of the 1960s and early 1970s. Constraint on state resources will continue unless actions to augment revenues are undertaken.
- Economic and demographic changes will require that institutions intensify their efforts to maximize existing resources. In this regard, the Commission believes that precise definitions of roles and missions and review and evaluation of the need for existing educational programs are two potential vehicles for identifying promising cost efficiencies.
- Public sector and private sector commitments to higher education are fundamental to the future success of the system. If all reasonable measures to maximize existing resources prove to be inadequate, it may become necessary to identify new sources of funding.

Section Two:

CRITICAL ISSUES FACING HIGHER EDUCATION

PRECOLLEGIATE EDUCATION

This Section includes information related to eight public policy areas which have, and will continue to, receive close Commission examination. These areas, in order of their presentation, are undergraduate quality, access,occupational supply and demand, program distribuition, economic revitatlization and research, finance and capital outlay and roles and missions.

Before presenting this issue material, it is important to acknowledge that the calibre of higher education depends on strong and challenging precollegiate programs. The Commission has found that discussions of higher education too rarely hone in on the points of linkage and common purpose which join sectors of the overall system--this has been especially true for secondary and postsecondary linkages.

The K-12 sector serves as a "feeder" system for postsecondary institutions. 72.5 percent of Michigan high school students earn diplomas from secondary schools.[1] 1982 data show that, of these secondary school graduates, 53 percent pursue postsecondary study, 90.5 percent of which is carried out, parttime or fulltime, in a Michigan postsecondary institution.[2] K-12 graduation standards also determine the degree to which college and university applicants can satisfy the admissions criteria and learning expectations of advanced insitutions. In order to serve the needs of young peple motivated to continue learning after high school, the Commission supports improved linkages between the K-12 and post-secondary levels.

In January, the State Board of Education adopted a K-12 reform plan entitled Better Education for Michigan's Citizens: A Blueprint for Action. The Board's plan for reform was considered in its entirety by the Commission. As a result, the Commisssion goes on record urging the timely implementation of four State Board proposals.

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[1]National Center for Education Statistics, 1981.
[2]Student Financial Assistance Services, Michigan Department of Education, "Report of Educational Plans of High School Graduates, 1982," March 1983.

- The development of a plan for improved coordination between all educational sectors. In addition, the Commission encourages the State Board of Education and the State Superintendent to examine ways for postsecondary institutions to improve articulation by communicating admissions standards to middle school students rather than concentrating these efforts on upper level students.

- The development of a plan to implement recommendations included in the Mason- Miller Report which are intended to increase the precollegiate preparation of minorities, females and handicappers.

- The recommendation that local boards of education adjust graduation requirements in accordance with the State Board's suggestion that all students complete core requirements and that students planning to attend four-year institutions satisfy additional course requirements.

- The Commission is particularly concerned about the low esteem in which the public holds the teaching profession and its resulting impact on student learning.Therefore, the Commission supports recommendations that the teaching profession be strengthened by improving teacher training curricula and by expanding opportunities to update skills.

QUALITY OF UNDERGRADUATE EDUCATION

Introduction

The core challenge facing this Commission can be formulated in a phrase: educational quality is key to Michigan's future betterment; quality must be preserved and enhanced. The Commission has found that Michigan's long-term investment in higher education, has, indeed, produced a quality system -- one which, by many measures, ranks among the best in the nation and the world. Therefore, an overrinding goal of Commission activity is to identify factors contributing to quality and attempt to protect these factors from erosion. At the same time, the Commission has sought to identify those factors which could contribute to an even greater enhancement of this vital enterprise.

Every issue and assumption discussed in this report must, necessarily, be discussed in the context of its contribution to the quality of higher education. As the Commission completes its final phase, it will continue to ask questions like: how can enrollment levels be influenced so that quality in each sector is not jeopardized, how can access problems be resolved so that a quality education is broadly available, what K-12 reforms would improve undergraduate quality and, relatedly, what undergraduate improvements would enrich graduate quality? As these questions demonstrate, each policy concern determines, to some degree, whether or not the higher education system is characterized as excellent or not.

Quality is also a concept associated with the educational process -- with teaching, learning and educational interactions between students and faculty. Because instruction is a primary mission of higher education, the Commission received information on the elements of quality associated with bachelor and asssociate degree programs and adopted a policy guideline which stated that "...postsecondary education should...prepare individuals to assume productive employment, to lead satisfying lives and to be effective citizens and leaders."

Information on the subject of undergraduate quality was prepared for the Commission based on the advice of faculty and administrators representing community colleges, private institutions and public four-year institutions. This section of the report focuses on four issues which the Commission has been advised could imminently affect undergraduate quality: student competency, curricular requirements, faculty and consolidated library resources.

FINDINGS

Student Competency

Survey research shows that many colleges and universities perceive incoming freshmen to have poor academic preparation. 1,269 institutions responding to a 1980 survey[1] reported that large numbers of entering freshmen require assistance in basic areas: 28 percent in reading, 31 percent in writing and 32 percent in mathematics. Remediation is, thus, a necessity on college and university campuses.

In light of the diverse compentencies of students, most higher education institutions offer coursework in basic areas. Such coursework is intended to raise student comprehension to a level compatible with postsecondary expectations. In some cases this coursework is redundant -- it exposes students a second time to subjects they should have mastered during their K-12 years. In other cases, remedial work is based on a tutorial model, for students needing help in overcoming specific problems. In either case, higher education institutions take responsibility for supporting admitted students in areas of academic weakness.

The Commission is concerned that both K-12 resources and higher education resources are often expended to teach identical skills at two different points in the educational continuum. In the short-term, in light of the documented deficiencies of many entering freshmen, higher education has an obligation to provide remedial services in as cost-effective a manner as possible. However, in the long-term, higher education should collaborate with the K-12 system to minimize the demand for campus-based, developmental programs in basic areas and where it is appropriate within the system to concentrate the develpmental courses that still must be offered. As a corollary to the need for remedial courses are questions of basic preparation at the point of admission and how targeted support services should be offered.

Although many high school seniors seeking college financial aid undergo standardized testing, other students-especially community college applicants--begin college with no standardized indicator of their strengths and weaknesses. Basic competency tests (either national tests or locally-developed tests) administered upon admission or before entry would help identify remedial needs before failure sets in. Although the Commission realizes the limits of standardized testing, entrance testing would allow institutions to target resources in order to retain students with diverse abilities.

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[1]Lederman, Marie Jean, S. R. Ryzewic and M. Ribaudo, Assessment and Improvement of the Academic Skills of Entering Freshmen Students: A National Survey, New York: The City University of New York, September 1983.

The issue of competency testing has relevance for high school graduates, as well as for college graduates. More and more, employers and faculty of graduate and professional schools are questioning the degree to which an undergraduate diploma predicts competence. These clients of undergraduate education increasingly assert the need for a battery of exit tests to certify that students have achieved certain competency levels. Few colleges and universities assess the degree to which their students master desired learnings prior to graduation.

Curricular Structures

A primary expectation of higher education--one endorsed by the Commission--involves the preparation of individuals to do more than just apply technical skills in the workplace. In an attempt to instill competencies, as well as to expose individuals to Western intellectual traditions, most bachelor and associate degree programs in Michigan involve a mixture of coursework in the arts, humanities, basic skills and an area of professional specialization.

As a mechanism for developing well-educated students, the general education curricular structure is intended to produce the attributes and competencies outlined below.

- A competency in use of the English language, including reading, writing, speaking and listening, as well as comprehension of a foreign language.
- An informed understanding of the history of civilization, with an emphasis on Western civilization.
- An informed understanding of man, the biological world, the physical sciences and scientific reasoning.
- An informed understanding of the nature of free society, with an emphasis on ethics, morality and integrity.
- An exposure to the arts and humanities, such that the individual can achieve life satisfaction and comprehend his/her civic responsibilities.
- The achievement of competence in mathematics and computer literacy.
- The achievement of competence in critical thinking and problem solving, such that the individual can critically inquire about the meaning of social values and beliefs and modify performance in light of changed circumstances.

The achievement of competence in applying the specialized skills needed to earn a living.

The term "general education" describes a structure for distributing course requirements. The general education curricular structure serves as a map to ensure that undergraduate students select and sequence courses so as to acquire a broad intellectual background--a liberal education.

Currently, the competition between higher education's economic and noneconomic goals has become keen. As students emphasize career orientations and downplay the humanities, higher education's ability to achieve the goal of liberal education is greatly weakened. In light of the need for balance, faculty, employers and citizens are reacting to the prospect of narrowly-educated graduates by re-examining the curricular structures capable of instilling educational breadth, a depth of values and flexibility in practical activity. Core curricula--versions of the general eduation concept where most courses are pre-selected for students--are receiving renewed attention.

Faculty

Since instruction is a primary function of higher education faculty quality and morale directly affect learning outcomes. These factors must be considered within the fluid supply and demand context which is found in Michigan's higher education system today.

Quality can suffer as institutions seek to maintain academic breadth by reassigning faculty and utilizing increasing numbers of adjunct and parttime faculty to help meet shifting student and instutional demands. Short-term measures such as faculty retraining, buyouts and early retirement incentives have been considered to enhance both institutional and faculty flexibility. In addition, higher education leaders must preserve a corps of trained full time faculty capable of nurturing graduate students and providing quality undergraduate instruction in the years ahead. A constant flow of talented new faculty must be assured in this ongoing faculty corps if it is to retain its vitality and vigor.

Faculty morale is another vital component in the ongoing process of developing a viable cadre of quality full-time faculty. Motivation is as crucial as technical competence to quality performance. Salary and working demands must be competitive if morale is to be maintained.

Similarly, a creative balance between institutional flexibility, faculty security and developmental incentives must be cultivated if quality faculty are to be nurtered and reinforced in a positive manner.

Given the dynamic nature of pressures at work in postsecondary education today, academicians are increasingly subject to the forces of supply and demand. Demand in academia is greatly influenced by student preferences regarding major fields. Recently, as bachelor degrees in language, literature and history have experienced a lower exhange value in the labor market, student emphasis on career-related training has increased. Such shifts in student demand have led faculty in low-demand, liberal arts disciplines to feel alienated from institutional missions. Complementary to this relative oversupply in the liberal arts, there is a drammatic undersupply of faculty in such currently high demand disciplines as engineering, computer science and certain allied health specialities. Problems such as these will inevitably continue in the years ahead as higher education is asked to serve an even more diverse audience in the midst of continuing budgetary limitations.

The challenge will be to provide reasonable institutional flexibility in response to ever-changing needs without eliminating incentives that are needed to develop and maintain a healthy corps of quality and motivated faculty. A review of the current tenure system is one issue that should be considered in this context.

Consolidated Library Resources

Libraries are intrinsically related to the functions of higher education. Their missions are to support the research, instructional and information needs of their parent institutions. Leaner budgets prevent libraries from meeting the high costs of adequate staffing, automating their operations and preserving their holdings.

These economic realities are exacerbated by the increasing demand for information services. Rapidly changing data bases increase the rate at which information becomes obsolete. In light of these changes, it is believed that traditional library activities will need to be modified to take advantage of comprehensive automation techniques. By now, larger libraries throughout the state have begun to apply labor-saving technologies to their activities. To date, however, formal or quasi-formal relationships between libraries have yet to be fully developed.

The Commission believes that expansion of library consortia and maximum use of automated technology could spread financial burdens among several institutions and could eliminate duplicative activities.

ISSUES FOR FURTHER INVESTIGATION

Therefore, in light of the above issues, the Commission will explore recommendations in the following areas:

1. **The potential usefulness of competency tests in improving higher education's ability to target remediation, improve**

retention and certify the skill level of graduates.

2. Techniques that could be used to encourage the maintenance of broad curricular requirements that will balance basic skills, arts, humanities and career-oriented courses.

3. Techniques that could be used to better attract, develop and utilize quality faculty in an environment of fluid educational system demands. This exploration will include ways to improve the credentials and morale of existing faculty, ways to attract quality new faculty, tenure modifications and other approaches that might be useful both to faculty and the higher education system in dealing with the pressures of supply and demand.

4. Incentives that could be used to encourage the use of education technology in the delivery of services, including the information services provided by libraries.

5. Techniques available to help focus the graduate training energies of Michigan institutions, to elucidate the unique and legitimate needs of graduate training programs and to identify how graduate programs impact upon Michigan's economy.

AFFORDABILITY AND FINANCIAL ACCESS

Introduction

Michigan's postsecondary education system has been founded on the premise that quality education must be provided to the greatest number of citizens at the lowest possible cost. Furthermore, it is the Commission's belief that postsecondary education should not be denied to students because of a lack of financial resources. Consequently, within its consideration of the broad higher education finance picture, the Commission concentrated on two specific issues: student access and family affordability. The terms access and affordability, as used in this context, refer to educational costs which must be borne by students/families, as well as to the mix of financial aid options that are present to facilitate college attendance when families cannot meet these consumer related expenses.

Background

Most existing student financial aid programs are based at least in part on the concept of demonstrated need. Financial aid then comes into play to help make up the difference between what the family can reasonably contribute and the total consumer costs related to the particular program of study the student selects. This arrangement is designed to support the public policy goals of access and choice for all students. Thus, the basic eligibility formula is as follows:

Consumer Related Costs
<u>- Expected Family Contribution</u>
= Need for Student Financial Assistance

(Unmet Need = Extent to Which There Are Inadequate Resources to Fund the Need Documented)

In arriving at the consumer <u>cost</u> portion of the formula, consideration is given not only to tuition and fee expenses, but also to such related costs as room and board, transportation/travel, books and equipment, incidental costs, etc. Such consumer cost totals are developed annually by schools themselves, as well as by other aid providers.

In arriving at the <u>expected family contribution</u> portion of the formula, a "snapshot" of the family's current economic circumstances is taken and "developed" according to established analysis guidelines. These basic guidelines are established each year on a national basis to permit consistent treatment of families in similar sets of economic circumstances.

The <u>need</u> portion of the formula is simply the remainder found after the subtraction process is performed.

The table that follows highlights the manner in which this process treats some sample family cases.

To meet the need of families that apply, a smorgasbord of aid options has evolved over the last 25 years. There are a variety of providers in this mix--the federal government, state government, institutions of higher education themselves, commercial lenders, other types of private organizations, etc.

This array of providers is associated with different types of student assistance (scholarships/grants, loans and employment) that are typically packaged together to meet the identified need. It can be noted that Michigan currently provides programs in all but the employment area.

Unmet need, then, is any amount by which the aid programs available fail to meet the formal need documented by means of the formula identified.

Table 1
IMPACT OF NEED EVALUATION ON SAMPLE FAMILY CASES*

Year Of Aid Application	Need Present by School Type For Various Income Ranges Reported											
	$12,000			$24,000			$36,000			$48,000		
	2 Yr. Pub.	4 Yr. Pub.	Pri.	2 Yr. Pub.	4 Yr. Pub.	Pri.	2 Yr. Pub.	4 Yr. Pub.	Pri.	2 Yr. Pub.	4 Yr. Pub.	Pri.
1983-84 Av. Cost	$3926	$4897	$7225	$3926	$4897	$7225	$3926	$4897	$7225	$3926	$4897	$7225
-FC**	$ 700	$ 700	$ 700	$2010	$2010	$2010	$4310	$4310	$4310	$7420	$7420	$7420
=Need	$3226	$4197	$6525	$1916	$2887	$5215	None	$ 587	$2915	None	None	None

*Family Circumstance Assumptions Made
1. One parent employed
2. Employed parent 45 years old
3. Wage income only
4. Standard IRS deductions
5. Family size = 4
6. 1 dependent undergraduate in college
7. Net family assets = $20,000
8. Applicant has summer employment potential (1983) and no personal assets (taxed at 35% rate)
9. No "unusual" circumstances present

**F.C. means Family Contribution

At the present time, postsecondary consumer costs in the State of Michigan are such that over 50 percent of those enrolled need assistance from one or more of the ten major government (state and federal) student aid options and/or the myriad of institutional and private programs in order to attend.

Given the magnitude of the consumer-related expenses involved, the fact that over half of all undergraduate students enrolled need such assistance to attend, and the often confusing variety

of student aid options available, the interrelated issues of consumer cost and financial aid influence whether postsecondary access and choice become realities for Michigan citizens.

FINDINGS

The Commission has focused upon four basic and interrelated financial access concern areas: affordability, adequacy of dollars, aid dollar mix and awareness. The staff background paper from which this summary is drawn elaborates upon each of these points and references related research data.

Affordability

Recent national reports of consumer perception indicate that postsecondary education expenses have of late: (1) outstripped family earnings and financial aid program development, and (2) begun to impede potential attendance plans.

Group Attitudes Corporation, for example, recently released the results of a nationwide study which concluded that ". . . these findings clearly show that college and university costs today are such that most people do not find them affordable, and (they) see worse times ahead."

Michigan students are particularly affected by this problem, because consumer-related expenses at postsecondary institutions within the state tend to exceed the national average. Table 2 highlights Michigan's comparative disadvantage with regard to current average tuition and fee rates.

Table 2
COMPARISON OF MICHIGAN AND AVERAGE NATIONAL EDUCATIONAL TUITION AND FEE EXPENSES FOR FULLTIME UNDERGRADUATE STUDY

	1983-84 Dist./St. Resident National Average*	1983-84 Dist./St. Resident Michigan Average**	Percent Difference
Public 2-year	$ 621	$ 744	Michigan 20% higher
Public 4-year	1,105	1,572	Michigan 42% higher
Private 4-year coll. & univ.	4,627	4,825	Michigan 5% higher

*College Scholarship Service College Cost Book
**Michigan T & F Study

This problem is further accentuated by the fact that not all portions of the state are currently served by a community college district and existing community colleges vary with regard to the array of programs offered. Thus, not every resident currently has access to the lowest cost postsecondary educational option available within the state.

Adequacy of Current Aid Dollars

Data provided by Michigan colleges and universities indicate that there is currently an undergraduate aid deficit of at least $70 million per year. In other words, students currently applying for assistance formally document an annual demonstrated need of about $70 million in excess of the resources available.

Table 3 highlights the current Michigan aid deficit and shows that the magnitude of unmet need tends to be increasing.

Table 3
AGGREGATE UNDERGRADUATE UNMET NEED REPORTED IN MICHIGAN*

School Type	Total Amount of Undergraduate Unmet Need Reported 1978-79	1980-81	Percent Change
Public two-year	$ 5,117,567	$19,022,030	+271%
Public four-year	12,916,670	25,628,251	+ 98%
Private colleges and universities	16,801,361	28,076,287	+ 67%
Total	$34,835,598	$72,726,568	+109%

*Michigan Department of Education Study

Data for 1982-83 are now being collected. While the study is still incomplete, it definitely indicates that the trend cited above is continuing.

The current federal 1984-85 budget proposals would further exacerbate this aid deficit by eliminating two of the three campus-based federal aid programs and the matching fund State Student Incentive Grant Program which is used to augment state aid funding. If enacted, federal proposals to cut Guaranteed Loan reinsurance, administrative allowance, etc., and to limit tax exempt bonding would further restrict financial access. Should those Administration proposals be adopted, an estimated $300 million in available

aid would be lost nationwide. A national loss of this magnitude would increase Michigan's unmet need (formally defined aid deficit) by $15 million.

At the state level, due to restricted resources 1984-85 student aid funding is being proposed at the same level as 1983-84, with the exception of a new $2.5 million merit program which would not use demonstrated need as a prerequisite.

Thus, as educational costs continue to rise, there is every indication that the present aid deficit will continue to grow.

Aid Dollar Mix

Within the current mix of undergraduate student aid resources available, the data indicate that long-term loans are growing much faster than other types of funds (scholarships, grants and work) and becoming the predominant type of funding available. Table 4 documents this trend in Michigan.

Table 4

REPORTED UNDERGRADUATE STUDENT AID DOLLARS BY TYPE OF AWARD OVER TIME*

Academic Year	Total Dollars by Category: Scholarship/Grant Amount	Scholarship/Grant Percent	Loan Amount	Loan Percent	Work Amount	Work Percent	Total Amount	Total Percent
1978-79	$131,640,531	51%	$71,023,435	28%	$54,468,504	21%	$257,132,470	100%
1980-81	192,881,842	41%	186,150,793	40%	86,187,239	19%	465,219,874	100%
Percentage Change in Amt.	+46%		+162%		+58%		+81%	

*Data from Michigan Department of Education Undergraduate Student Aid Survey

Once again, 1982-83 information, while incomplete, tends to substantiate this trend.

A recent report by the College Board entitled, Trends In Student Aid: 1963 to 1983, indicates that on the national level:

> "There have been major shifts over time in the overall proportions of aid awarded in the form of grants and loans. . . . Average grant aid per FTE student is an estimated 53 percent lower in 1983-84 than in 1975-76. Over the same period, the average loan per FTE student grew by 123 percent. . ."

Increased indebtedness expectations for needy students may well jeopardize perceived access and serve to influence or dictate the future plans of such applicants.

Awareness

State and national data clearly indicate that the vast majority of prospective postsecondary students do not understand current financial assistance programs, application procedures and time-frames. Such lack of awareness is often directly related to socioeconomic status so that prospective students who most need financial assistance are least likely to be familiar with the options available.

ISSUES FOR FURTHER INVESTIGATION

Therefore, in considering these issues, the Commission will explore recommendations in the following areas:

1. Options available to simplify programs and procedures to facilitate consumer understanding and expand current student aid outreach efforts.

2. The level and mix of institutional support and direct student assistance, in the form of scholarships, grants, loans and work-study that will best facilitate student access.

3. Techniques that can be used to help stabilize tuition rates and assess their student impact.

4. Statewide options available to expand in-district community college programming.

5. Techniques that could realistically be used to reduce the amount of aid dollars needed to fully fund the current aid delivery system and alternatives available for enhanced program funding.

6. The potential need for changes in the mix of resources available to private and public higher education students and in the current mix of need- and nonneed-based aid programs.

7. The potential need to reduce growing reliance upon student loans.

EQUITY OF ACCESS FOR HANDICAPPERS, MINORITIES, WOMEN, AND OLDER ADULTS

Background

In 1954, (Brown v. Board of Education), the U. S. Supreme Court forcefully stated that "admissions to publicly supported colleges and universities may not be denied on the basis of race." Later legal decisions and federal policies have explicitly expanded the concept of access to include Title IX[1] for women and Section 504 for handicappers.

In considering educational access, the Commission has drawn on analyses of enrollment data, information in the Joint Task Force Report on Minorities, Women and Handicappers in Michigan's Colleges and Universities, 1982 (hereafter referred to as the Mason- Miller Report), and input from individuals representing all sectors of higher education and related state departments.

The Commission has found that, during the past two decades, access to higher education was expanded. However, in specific areas, considerable work is needed to ensure that every state resident seeking a college education has an equal opportunity to achieve that goal. For example, in the 1970s, significant enrollment gains were made on the part of minorities and women. Nevertheless, in 1984, major concerns still exist regarding the participation of these groups in higher education.

As Fred E. Crossland stated in Minority Access to College: A Ford Foundation Report (1971), ". . .although the concept of universal access to postsecondary education has been accepted. . .-black enrollment. . .probably will not reach, by 1980, the point at which the ratio of black students to total enrollments equals the ratio of all blacks to the total population. Other minorities will be even more poorly represented." In Michigan, although minority and handicapper students are overrepresented in public two-year colleges, they are notably underrepresented in the baccalaureate and graduate programs at four-year colleges and universities. In these latter settings, Crossland's prediction appears true in Michigan.

Based on a policy guideline which states "Postsecondary education should not be denied to students because of race, sex, age, ethnicity, handicap or geographic location," the Commission reviewed comprehensive information on minorities, women, handicappers and adult learners. Findings are presented for each group in the following pages.

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[1]Title IX - Federal Regulation to eliminate sex discrimination in education.

FINDINGS: MINORITIES

Participation of Minorities in Higher Education Nationwide

During the early 1970s, the proportion of fulltime black undergraduate students increased to 10 percent.[2] Between 1970 and 1976, the proportion of black post-baccalaureate students dropped below its 1970 level. As Table 1 indicates, between 1976 and 1981, the percent of blacks earning bachelor degrees increased from 6.4 in 1976 to 6.5 percent in 1981; the percent earning masters degrees decreased from 6.6 to 5.8 percent; and the percent earning doctorates increased from 3.6 to 3.9 percent.

Table 1
BLACKS AS A PERCENT OF ALL DEGREE RECIPIENTS

	Bachelor's		Master's		Ph.D.'s	
	1976	1981	1976	1981	1976	1981
Psychology	10.0	13.4	5.3	5.3	2.6	3.9
Biol. Sci.	4.3	5.3	3.3	2.9	1.5	1.7
Physical Sci.	3.0	3.8	2.5	2.0	1.2	1.0
Engineering	3.0	3.3	1.5	1.6	0.7	0.9
Ag./Natural Resources	1.4	1.7	2.3	1.8	2.0	1.4
Computer Sci.	5.8	5.2	2.4	1.7	0.0	0.4
Social Sci.	8.7	8.1	5.6	5.2	2.8	3.9
Mathematics	5.1	5.3	3.4	2.3	1.1	1.2
All Fields	6.4	6.5	6.6	5.8	3.6	3.9

A recent Rockefeller Foundation study[3] analyzed minority participation in various areas of study. The report concludes that, due to inadequate precollege educational preparation, Blacks, American Indians and Hispanics are not likely to increase their share of total graduate degrees earned. These trends can be used as an indicator of where Michigan should focus its concerns about access.

2National Center for Education Statistics, Participation of Black Students in Higher Education: A Statistical Profile form 1970-71 to 1980-81.
3 Berryman, S., Who Will Do Science, Rockefeller Foundation.

From 1980 to 1982, minority enrollments for public, four-year institutions and public, two-year institutions have decreased. During that time, there was a minor increase within private institutions, as illustrated by Table 2.

Table 2
MINORITY HEADCOUNT ENROLLMENTS, MICHIGAN, ALL SECTORS
1980-1982

1980	PUBLIC 4	PUBLIC 2	PRIVATE
BLACK	8.0%	13.7%	12.5%
HISPANIC	1.0%	1.7%	1.1%
AM. INDIAN	0.5%	0.7%	0.4%
ASIAN	1.1%	0.9%	1.0%
SUBT. MIN.	10.6%	17.0%	15.0%
UNKNOWN	n/a	n/a	5.4%
WHITE	89.4%	83.0%	79.6%
TOTAL	100.0%	100.0%	100.0%

1982	PUBLIC 4	PUBLIC 2	PRIVATE
BLACK	7.0%	11.7%	13.1%
HISPANIC	1.0%	1.4%	1.2%
AM. INDIAN	0.4%	0.8%	0.4%
ASIAN	1.3%	0.8%	1.0%
SUBT. MIN.	9.7%	14.7%	15.7%
UNKNOWN	5.2%	2.3%	0.0%
WHITE	85.0%	83.0%	84.3%
TOTAL	100.0%	100.0%	100.0%

Sources of base data. 1980 Mason-Miller Report, 1982 Michigan Department of Education Higher Education Planning Unit.

Factors Affecting Minority Participation in Higher Education

As found in various national studies, and in Michigan's Mason-Miller Report, six factors influence minority students to choose or reject attendance at predominantly white educational institutions. These critical factors, listed in order of their importance, are financial aid availability, the number of minority faculty, staff and administrators on campus, availability of minority-oriented campus events (cultural and social), availability of institutional information programs which address minority student problems, use of minority students and faculty as recruiters and quality and reputation of the institution.

Not only do these factors influence where a student goes to college, they also influence whether students succeed in completing educational requirements once they are admitted.

FINDINGS: WOMEN

Background

From 1970 to 1983, the absolute number of women enrolled in Michigan's public and private institutions grew by almost 70 percent. By comparison, male enrollments grew by only 6 percent with an actual decline from 1975 to 1983.[4] Furthermore, the proportion of women grew from 40 percent of total enrollments in 1970 to 52 percent in 1983. Conversely, male enrollments dropped from 60 to 48 percent.

The phenomenal growth of female enrollments was due, in part, to significant increases in the number of nontraditional females who became college students (those 25 years and older).

Participation of Women in Higher Education

The National Center for Education Statistics[5] reports substantial progress by females in earning bachelors, masters and doctoral degrees. The data show that the number of degrees awarded to women remains disproportionately low in academic areas historically dominated by males, such as engineering, mathematics, physical sciences, and theology. Conversely, women continue to concentrate in education, fine and applied arts, foreign languages, health professions, home economics and library science.

As shown on Table 3, females have garnered a larger share of degrees at all levels. However, parity between the sexes has only been approached at the undergraduate level.

Table 3
PERCENT OF DEGREES EARNED 1970-1979
United States

	1971		1979	
	Women	Men	Women	Men
Bachelors	29.2	70.8	50.0	50.0
Masters	35.2	64.8	39.0	61.0
Doctorate	15.4	84.6	29.0	71.0

Source: Randour, Strasburg, and Lipman-Blumen, "Women in Higher Education: Trends in Enrollment and Degrees Earned," Harvard Educational Review, Vol. 52, No. 2, May 1982.

4Michigan Departmen of Education, Higher Education Management Services.
5Treiman, P.J. and Hartmann, H.I., Women, Work and Wages: Equal Pay for Jobs of Equal Value, Washington D.C.: 1981

This phenomenon is also borne out by associate degree statistics. At community colleges, women earned 87.6 percent of the degrees and awards in health services and paramedical technologies nationwide. However, they only earned 6.0 percent of the degrees and awards in medical and engineering technology.[6]

These facts will direct the Commission in considering how higher education can better satisfy society's intention that women earn more income and enjoy increased professional status.

Factors Affecting Women's Participation in Higher Education

The institutional environment in general, and classroom climate in particular, can have a major impact on the academic and professional development of female students.

Faculty behaviors help create the classroom climate. Although faculty members may wish to treat all students fairly and equally, there are a broad range of subtle biases and inequities which many faculty and administrators may unconsciously exhibit. The Project on the Status and Education of Women cites several forms of subtle discriminatory behavior: condescension, role stereotyping, sexist comments, hostility, exclusion, denial of status and authority, invisibility, double standards.

Sexual harassment is another form of negative classroom climate. Although there have been legislative efforts to deter the practice of sexual harassment, recent administrative decisions and faculty firings underscore the fact that sexual harassment still occurs.

Characteristics of Current Women Students

There has been an increasing number of older adults entering postsecondary institutions. In defining the nontraditional woman student, it should be kept in mind that female adults can be categorized into diverse subpopulations. These subpopulations include: minority women, displaced homemakers, single parents, and older women. Members of these subpopulations can experience discrimination based not only on their sex, but on their race, age, marital status and/or marginal income status.

In addition to discrimination, other obstacles can exist for these individuals, such as credit transfer problems, need for support services, and problems associated with their part-time status. Each of these problems has the potential to complicate the already difficult adjustment dilemmas of older, re-entering students.

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[6]Pepin, A. J. and Wells, A. Q., Associate Degrees and Other Formal Awards Below the Baccalaureate 1978-1979, Washington, D. C.: National Center for Education Statistics, 1981.

FINDINGS: HANDICAPPERS

Background

Equal educational access for handicappers is mandated by federal and state law. Section 504 of the Rehabilitation Act of 1973 and Public Act 220 (entitled Michigan's Handicappers' Civil Rights Act) are the civil rights statutes protecting handicapper rights. Pertinent aspects of each statute are discussed below.

Section 504 of the Rehabilitation Act of 1973 states that "No. . . qualified handicapped individuals. . .shall, solely by reason of his handicap, be denied the benefits of, or be subject to, discrimination under any program or activity receiving federal financial assistance." The Section 504 mandate became effective April 28, 1977; it binds recipients of federal funds, including public and private postsecondary education institutions.

Section 504 defines a handicapper as any person who has a physical or mental impairment which substantially limits one or more major life activities; has a record of such an impairment; is regarded as having an impairment or is a drug addict or alcoholic.

The legislation mandates that affected agencies demonstrate "reasonable accommodation," that is, make their programs, services and facilites accessible to handicappers.

Michigan Public Act 220 defines a handicap as a determinable physical or mental characteristic or a history of the characteristic which may result from disease, injury, congenital condition or birth, or function disorder. P. A. 220 further clarifies a handicapping characteristic as one which

- Is related to the individual's ability to perform the duties of a particular job or position, or is unrelated to the individual's qualifications for employment or promotion;
- Is unrelated to the individual's ability to utilize and benefit from a place of public accommodation or public service;
- Is unrelated to the individual's ability to utilize and benefit from educational opportunities, programs, and facilities at an educational institution; and/or
- Is unrelated to the individual's ability to acquire, rent or maintain property.

Elementary and secondary educational services are also legally mandated for handicappers. Nevertheless, some students reach the end of their elementary and secondary school experience unprepared for competitive employment or independent lives.

Upon completion of secondary school, handicappers are able, through human service agencies, to enroll in community programs that provide continued or specialized training. Computer technology and devices engineered to extend functioning offer increasing opportunities for handicappers to achieve full independence and to realize their full social potential.

Participation of Handicappers in Higher Education

Data on the total handicapper population in postsecondary institutions have not been systematically collected in Michigan. Without reliable data, any analysis of handicapper degrees and enrollments is severely limited. However, Michigan handicappers have reported to the Commission that barriers still prevent their full participation in postsecondary education.

Factors Affecting Handicapper Participation in Higher Education

Some handicappers' readiness for higher education is related to the lack of preparation in certain areas as found below:

- Low self-esteem, fear of failure, lack of environmental control, lack of assertiveness.
- Independent living skills and resources (transportation, personal aides when necessary.)
- Lack of financial resources.
- Inadequate educational/career planning goals.
- Basic skills deficiencies.
- Lack of knowledge in the use of support services.
- Experiential learning deficiencies.

Due to the perceived high cost of implementing section 504, various models have been developed and initiated by Michigan's higher education institutions to provide accommodations to handicappers. Some institutions adhere to the model of accommodation upon request. Other institutions actively recruit handicappers, and, once admitted, they consciously include handicappers in the mainstream of campus life. Those institutions program comprehensively for handicappers by providing financial aid assistance and structural modifications. They provide support services such as interpreters for the deaf, readers, notetakers and sign interpreteres for those who need alternative format services, alternative equipment, personal aides, and transportation. Where programs or services are not handicapper accommodating by other means, they remove environmental barriers. Finally, they serve as advocates with college faculty and staff. However, with increasing costs and continuing budget cuts, many institutions mandated to provide accommodations have lacked the funds needed

for maximal compliance.

FINDINGS: ADULT LEARNERS

Up until the 1940s, student characteristics were relatively stable and predictable; college enrollees were young members of the upper middle class. After World War II, the higher education system shifted from an elite to a mass constituency. Today, student profiles deviate from the characteristics of 18-to-24-year-old high school graduates. Increasingly, undergraduate students are older, have experience in the labor market and possess concrete educational goals.

Four-year colleges and universities have traditionally been structured to meet the needs of younger, fulltime students with few or no outside responsibilities. However, in recent years there has been an increase in the number of older adults. The impact of adult learners has been felt nationwide, as colleges and universities report dual trends: dramatic increases in the enrollment of adult students and a decline in the pool of traditional age students. Higher education could come to encounter resistance from older students unless teaching methods and supports are adapted to their unique needs. As discussed in the section entitled "What Trends Must Be Considered In Planning for the Future of Higher Education?" some changes to meet the needs of adult learners have been initiated. However, many adjustments will need to be accelerated.

ISSUES FOR FURTHER INVESTIGATION

Therefore, in considering these issues, the Commission will explore recommendations, as suggested by the Mason-Miller Report, in the following areas:

1. Options available for development of a coordinated access and program database for women, minority, handicappers and adult learners. This data should cover information relative to recruitment, enrollment, support services, retention, major/career selection, graduation, employment, school goals, policies and procedures affecting the populations specified.

2. Profiles of support services available and additional services needed to ensure the broadest possible access to postsecondary study for minority, women, handicapper and adult learners.

3. Techniques available to help institutions expand hiring practices with regard to minorities, women and handicappers.

4. Research on model institutional programs and policies regarding access, support services and retention for minorities, women, handicappers and adult learners, and dissemination of this research.

OCCUPATIONAL SUPPLY AND DEMAND

Background

In developing its policy guidelines, the Commission recognized a fundamental relationship between the labor market and postsecondary education. One of the Commission's stated goals for postsecondary education in Michigan is that the system "prepare individuals to assume productive employment, to lead satisfying lives and to be effective citizens and leaders."

This section focuses on the postsecondary institutions' role in preparing individuals for productive employment. Examination of occupational supply and demand data is basic to the study of this human development function. Supply/demand analyses are an effort to assess whether there will be too many or too few qualified persons to fill individual occupations. Indications at the national level are that surpluses may occur in many fields. Thus, in order to make the best of human and fiscal resources, an examination of occupational supply and demand data is crucial to the Commission's deliberations.

Attributes of Available Data

A variety of occupational demand and/or occupational supply information is available currently. Studies differ according to a number of characteristics: analyses of supply, demand or both, the time period covered and the economic or labor force sectors included. Evaluation of occupational needs requires information on both occupational supply and demand.

In general, analyses of demand the are most available. These analyses project the number of job openings, but do not project the number of potential workers to fill those jobs. Demand analyses therefore do not give a rounded picture.

The development of supply forecasting capability has lagged behind that of demand. Major problems have been that (a) the supply data has been based on educational fields which are not easily converted to occupational categories (in order to be compared with the demand projections), and that (b) some supply forecasts assume the number completing various educational programs will be constant over time, rather than forecasting increases or decreases.

Unfortunately, supply and demand analyses are not currently available for all occupations that require postsecondary education, at either the state or national level. In general, supply and demand analyses are available for occupations that require two-year postsecondary training. There are also analyses available for a very limited number of occupations that require four or more years of higher education (such as dentistry).

Analyses of supply and demand are not currently available for occupations that draw from more general fields of study, such as liberal arts. In many degree areas, graduates may enter a diverse array of occupations. Often, the paths between the degree programs and the occupational catregories are so diffuse that it is difficult to determine the link between potential supply and demand.

There are two approaches to assessing occupational needs. Some analyses project for the economy as a whole, that is, individual occupations are analyzed within the context of overall economic and employment trends. Other analyses look at just one sector, occupational category or graduates of a particular institution.

National Supply/Demand Analyses

The United States Department of Labor's Bureau of Statistics predicts a 15 to 25 percent surplus of graduates of four-year institutions during the period from 1980 to 1990.[1] A separate analysis of the likely supply/demand balance for Ph.Ds for the period from 1976 through 1985[2] projects a favorable balance for engineering only. Other fields were predicted to be unfavorable for Ph.Ds, as shown below:

ESTIMATED OPENINGS FOR TRADITIONAL PhD EMPLOYMENT
1976-1985

	Projected New Supply of Ph.D.'s, 1976-1985[a]	Estimated Openings for Traditional Ph.D. Employment, 1976-1985	Difference between New Supply and Openings in Traditional Ph.D. Employment[b]	
			Number	Percentage of New Supply
ALL FIELDS	323.0	192.8	130.2	40.3
Engineering & natural science	114.7	100.8	13.8	12.1
Engineering	22.7	32.4	-9.7	-42.8
Physical sciences	30.7	27.4	3.3	10.8
Chemistry	16.6	14.7	1.8	11.2
Physics	7.6	3.7	3.9	51.2
Life science	51.7	35.4	16.2	31.4
Mathematics	9.6	5.6	4.0	41.6
Social science & psychology	70.5	41.5	29.0	41.2
Arts and humanities	37.0	12.4	24.6	66.6
Education	80.4	31.5	48.8	60.8
Business and commerce	8.0	2.9	5.1	63.6
Other fields	12.4	3.6	8.8	70.8

Note: Figures are in thousands, except for percentages

[a] Based on NCES projections

[b] Does not take into account the 80,200 Ph.D.'s employed in 1976 in "nontraditional Ph.D. jobs." These individuals may try to change to "traditional Ph.D." jobs during the 1976-85 period and thus increase the competition for "traditional Ph.D." employment.

Source: Douglas Braddock, "The Oversupply of Ph.D.'s to Continue Through 1985," Monthly Labor Review, Vol. 101, No. 10, October 1978, pp. 48-50.

[1]John Sargent. "The Job Outlook for College Graduates During the 1980s," Occupational Outlook Quarterly, Summer 1982. pp. 3-7

[2]Douglas Braddock. "The Oversupply of Ph.D.s to Continue Through 1983," Monthly Labor Review, Vol. 101, No. 10, October 1978.

These national data do not address the potentially unique characteristics of the labor market in Michigan or the predicted balance for subcategories of the larger classifications (for example, undergraduates in engineering as opposed to philosopny, or Ph.D.s in petro-chemical engineering as opposed to electrical engineering). They do, however, portend general trends that raise serious policy questions for postsecondary education.

FINDINGS

1. An incomplete occupational supply and demand data base exists. It could, however, provide some direction for decision making if reasonable assumptions are made. Additional analyses are necessary to determine the supply/demand balances at the state level. Existing information is most useful for specific occupational areas where there is a clear relationship between the field of study and the occupation. The same is not necessarily true for those occupations where there is no clear link between the field of study (philosophy, for example) and the subsequent occupation.

2. There currently is no uniform, comprehensive mechanism in Michigan to incorporate occupational supply and demand information into state decisions on higher education. Efforts should be made to use this information for decision making, particularly during the appropriation process.

3. There is currently a system for disseminating demand information. The Michigan Occupational Information System, operated jointly by the Michigan Departments of Education, Labor and Michigan Employment Security Commission, serves 2,237 different sites in Michigan at no cost. Sites served include most public K-12 schools and institutions of higher education. The system does not currently include information on supply.

4. There are at least three ways in which higher education can use occupational supply and demand information.

    - Anticipate and plan for imbalances in supply and demand in determining staffing levels and developing curricula;
    - Initiate action to attract or create job openings, and to support the state's economic development efforts; and
    - Provide information on the employment status of graduates and overall occupational supply/demand outlook to its student consumers to encourage more informed individual choices.

5. Higher education could also strengthen available supply and demand data by providing follow-up information on its graduates to labor market analysts, high school counselors, and students.

ISSUES FOR FURTHER INVESTIGATION

The Commission will explore recommendations in the following areas:

1. The level of supply/demand data currently available, how it is being used by Michigan postsecondary instituions and techniques for improving information disseminated by the Michigan Occupational Information System (which is operated jointly by the Michigan Departments of Education and Labor and the Michigan Employment Security Commission).

2. Techniques available to enhance the use of supply/demand data by institutions of postsecondary education in program/faculty planning, program/job creation and student information.

3. Mechanisms for analyzing Michigan-specific data where there is a clear link between that field of study and occupations (such as education, engineering, health care professions and journalism) and techniques for incorporating this data into the state resource allocation process.

PROGRAM DISTRIBUTION

Introduction

Economic and demographic trends require that the state and institutions review how resources in higher education are currently allocated. A comprehensive review of programs would be a major step in this direction. However, no comprehensive review of program offerings for all postsecondary sectors has been undertaken in at least the recent past.

Background

The public education system in Michigan offers a diverse array of fields of study, through a variety of mechanisms that range from actual "hands on" experience to telecommunications.

Public colleges and universities provided 37 curricula, encompassing approximately six million student credit hours in FY 1981-82 During that same period, community colleges served 127,163 fiscal year equated students (approximately 4.1 million credit hours) in 32 curricula.

Program Levels

The three sectors of Michigan higher education, i.e., state colleges and universities, community colleges and independent colleges and universities collectively provide one of the most comprehensive and diverse academic delivery systems in the nation. The scope and configuration of program offerings span most fields or disciplines of knowledge. The instructional outputs of the system are generally focused within nine sequential degrees and certification levels:

- certifications involving less than 2 years of post-secondary education
- associate degrees
- masters degrees
- specialist certifications
- doctorate degrees
- post-doctorate certification
- graduate/professional degrees

Community College Trends

The academic program offerings of Michigan community colleges have changed dramatically over the past quarter century. During the late 1960s more than two-thirds of the instruction output occurred in traditional liberal arts disciplines. Today, the majority of course offerings and enrollments (56 percent) focus upon career-related disciplines such as business, allied health and other vocational or technical fields of study. More than 60 percent of the students enrolled in community colleges are

employed. The average student is 24 years old or older. Most are attending community colleges for employment-related training or education.

It is anticipated that the community college role as a center for career education, retraining and job upgrading will continue to expand well into the next century. It is highly probable that community colleges will experience increased public demand for remedial, developmental and personal enrichment courses, due to the growing sophistication of society in general. No major systematic growth is anticipated in traditional college transfer programs. However, community colleges will be increasingly relied upon to provide initial training in advanced technologies to students who will eventually culminate their academic preparation at baccalaureate institutions.

College and University Trends

The configuration of academic programs at public and independent baccalaureate institutions continues to focus upon true bachelors and graduate levels of instruction. Most four-year institutions offer numerous undergraduate degree majors in the traditional disciplines (Letters, Foreign Language, Mathematics, Physical Science, Social Science, Fine and Applied Arts, Biological Science, Psychology Business, and interdisciplinary studies.) This emphasis upon liberal education will likely continue in the years ahead. However, there is evidence to suggest a trend toward career-related education. More than 90 percent of the undergraduate and graduate programs authorized for implementation by the legislature since 1975 support specific careers paths.

The primary focus of instructional output in the independent college sector occurs at the baccalaureate degree level. A few insitutions provide a select number of masters, doctorate, and graduate professional levels.

In the public college and university sector, 66 percent of the instructional output occurs at the baccalaureate degree level; approximately 30 percent takes place at the masters level; and 10 percent occurs at the doctorate and graduate professional levels. The number of state institutions involved in various levels of instruction is summarized as follows:

Degree Level	Number of State Colleges & Universities Offering Programs
Associate	3
Bachelors	15
Masters	15
Specialist	10
Doctoral	7
Graduate Professional	4

FINDINGS

Program Adequacy

Throughout the 1970s, various legislative analyses indicated that the relative levels of state financial support for community colleges, state colleges and universities, and independent colleges were not sufficient to sustain the system in qualitative or quantitative terms. One study concluded that the system should be viewed as being either underfinanced or over-extended.1 The range of financial shortfalls indicated varied from 12 percent to more than 25 percent among institutions. In the absence of sufficient state dollars to sustain long-range expenditures at current levels in higher education, and considering projected demographic and enrollment trends, the most logical conclusion is that the system is programmatically over-extended.

Occupational Supply and Demand

An additional concern in considering program distribution is the availability of appropriate programs for future student employment. It is difficult to determine the extent to which graduates of postsecondary institutions gain the employment they seek, since uniform follow-up data are neither collected nor regularly analyzed on a statewide basis. A review of recent follow-up repots of new graduates indicates,however, that 12-15 percent are unemployed and seeking employment. Data for one of these institutions also indicate that (using a scale of 1-5) 34.2 percent of the respondents believed that their job related or nearly related (rated numbers 4 and 5) to their field of study. The remaining belived that their field of study did not relate, or only marginally related, to their job. Although these data are institution-specific, and simply reflect the subjective judgments of the respondents, they do signal a need for careful review of programs.

Telecommunications

Finally, in looking at the statewide delivery system, a proliferation of advance telecommunications alternatives has raised intriguing issues for public policy discussion. Although virtually every institution of higher education has at least one course offered through telecommunications (often computer science, general history or general science), it is not currently possible to obtain a degree, to readily access courses from other institutions or to receive extensive programming through this medium. Further, no comprehensive review of existing telecommunications programs has been undertaken at the state level to consider their cost

1Senate Fiscal Agency, Fiscal Crisis Impacts on Michigan State Colleges and Universities, 1980-83, April, 1983.

efficiency or effectiveness.

Program Review and Authorization

At the present time, there are only limited mechanisms for making program adjustments at the state level. The State Board of Education licenses private occupational institutions and approves programs for implementation at community colleges. The legislature authorizes new degree programs at state colleges and universities for purposes of state funding, although state institutions may initiate new programs without this authorization. Thus a comprehensive mechanism to ensure quality, access and cost efficiency as a matter of long-range public policy does not exist.

Conclusions

In reviewing the complexities of program offerings across the state, it is clear that making program delivery more cost efficient without sacrificing quality is critical if scarce resources are to be maximized. Further, perceived inefficiencies can profoundly influence the willingness of the public to support postsecondary education. In view of these concerns, the Commission recommends that all postsecondary institutions observe an immediate moratorium on the implementation of significant new programs until an effective statewide review process has been developed. Further, The Commission supports the actions of the Governor and the legislature in establishing a moratorium on capital outlay authorizations and recommmends its continuation until an objective criteria for determining capital needs is implemented.

ISSUES FOR FURTHER INVESTIGATION

Executive Order 1983-11 instructs the Commission to make recommendations on program offerings in the context of "monitoring cost efficient centers of advanced learning which make maximum use of existing facilities and talent resources." In accordance with this charge, the Commission will explore recommendations in the following areas:

1. Assess the adequacy of existing academic program configurations throughout the system with regard to student demand, labor needs, regional access, standards of excellence and cost.

2. Examine current processes and future options for assuring reasonable program review prior to policy decisions regarding the authorization of new academic programs, as well as the expansion, reduction, merger, or discontinuance of existing programs.

3. Explore the feasibility of achieving improved program quality, cost efficiency, and access opportunity through innovative resource sharing endeavors such as telecommunications networks, regional consortia, and interinstitutional program agreements.

4. Consider the development of statewide policy objectives and guidelines regarding the scope and levels of academic programing in each sector of the system and the achievement of those objectives on a timely basis.

ECONOMIC REVITALIZATION AND RESEARCH

Introduction

A strong higher education system is critical to Michigan's economic development. As Governor Blanchard stated in his charge to the Commission, ". . .higher education is vital to our future and to Michigan's being a world class center of business, industry, commerce (and) trade." Higher education can serve an important role in helping to reestablish Michigan's economic base by assisting business diversification and marketability, conducting research leading to innovation, sustaining a well-educated work force and initiating responsive job training programs.

The Commission has adopted the following economic development policy guidelines:

- Creative efforts should be made at the state and institutional levels to facilitate interaction among the higher education community, the private sector and government to enhance economic development within the state.
- Job training and retraining services should be fully integrated into the programming of the appropriate sectors within Michigan's higher education enterprise.
- Enhancing the strength and national standing of Michigan's research institutions should be a priority.

Background

There are two fundamental challenges that face the Commission in its work on economic development:

- To find ways to create and foster linkages between higher education institutions and both the private and public sectors; and
- To focus attention on long-term strategies rather than concentrating solely on short-term problems and issues.

In responding to these challenges, the Commission seeks to encourage partnerships among academic institutions, private businesses and, where appropriate, government agencies. Specifically, the Commission will search for ways to reduce barriers, to increase private sector support for higher education and to make academic institutions more sensitive to the needs of private businesses.

Above all, the creation of a favorable economic environment for research-based companies depends upon both the ambiance

and the discoveries generated by institutions of higher education. Because the creation and growth of spinoff companies takes a long time, academic contributions to the business sector also take time to reach fruition.

FINDINGS

Commission findings about the relationship between higher education and economic development fall into four categories: degree programs, support for business and industry, research and research funding, and the image of Michigan's education system. This categorization is ccnsistent with the initial work plan adopted by the Review Panel on Economic Development and Research. Findings in these areas are summarized in the material which follows.

Degree Programs

The higher education system is now engaged in a wide and expanding variety of efforts that facilitate economic development. Efforts range from general instruction which provides the occuptional skills needed by the state's businesses to the commercialization of specific, highly technical research.

One important observation,frequently overlooked when economic development and education are examined, is that the most significant contribution made by higher education to Michigan's economic development is its primary output: the graduates produced by the institutions. A well-educated population is clearly one of Michigan's most significant economic development assets. Thus, quality instruction, both graduate and undergraduate, must be a keystone for any economic development recommendations.

Educational Support for Business and Industry

In addition to instruction, however, the higher education system has devised more specific strategies and mechanisms to facilitate economic development. Perhaps the most sophisticated strategy is the commercialization of basic research through the technology transfer agents designated by most of the state's universities.

The term technology transfer is popularly used to describe a process of shifting knowledge and entrepreneurial talent between educational, governmental and industrial organizations, and small science and technology-oriented businesses. The creation and nurturing of spinoff companies is a most important economic development mission. Studies of the Route 128 and Silicon Valley show that technological innovations were typically exploited by new firms created locally rather than by pre-existing corporations.

Various ways of assisting the technology transfer process are being used by Michigan and its higher education institutions. Examples of technology transfer agents soon to be fully operational include three not-for-profit corporations. While they are free

standing entities, they will work closely with the research universities. They are the Industrial Technology Institute (Ann Arbor) the Molecular Biology Institue (East Lansing) and the Metropolitan Center for High Technology (Detroit).

In addition, some for-profit corporations have been formed to assist academic entrepreneurs in starting new firms, namely Neogen (MSU), Michigan Tech Ventures, Inc. (MTU), the Michigan Research Corporation (U of M).

A variety of less high technology oriented efforts also exist. These typically concentrate on providing technical assistance to business. Examples of this activity include the Small Business Institute (CMU), the Industrial Development Institute (MSU/LCC), Bureau of Industrial Development (MTU), Cooperative Extension Service (MSU).

One barrier to these efforts which is often mentioned is conflict of interest rules. Some institutions now claim ownership of all discoveries and patents resulting from research conducted in their facilities. While the institutions appear to be developing less restrictive policies, concern continues to be expressed by a variety of the people interviewed by Commission staff that conflict of interest rules stifle research. Existing proposals should be evaluated for potential action.

Job Training

Job training and retraining is another way in which the higher education system contributes to economic development. A new federal initiative, the Job Partnership Training Act, will provide Michigan $175 million annually for job training and retraining.

The community college system, of course, is especially active in this area. A recent report identifed numerous job training courses, seminars and contract programs financed by employers. "Quick-start" programs, training designed specifically to meet the needs of a new or expanding company, are also offered by ths system. Therefore, the role of community colleges in job training should be carefully assessed.

Research and Research Funding

Because interstate rivalry in the attraction and nurturance of science/engineering based industry is so intense, the state should pay special attention to centers of excellence in emerging technologies.

Recent investigation of the linkage between industrial development and academic research has identified four necessary conditions for a cluster of high technology firms to spinoff. The academic institution must be excellent, performing work at the frontier of the discipline. There must be a spirit in the institution that encourages entrepreneurship. Venture capital must be available

and accessible. Both the research institution and the spinoff firms need contracts (research or procurement) to grow through the infancy of the technology.

One factor inhibiting research, and therefore, also inhibiting economic development, is Michigan's very poor record at earning federal research and development funds. A recent analysis conducted by the Michigan Department of Commerce determined that Michigan's higher education institutions received only 2.7 percent of available federal research and development funds.

Michigan's earning record is even more distressing when it is compared to what "should" have been earned. In the Department of Commerce analysis, a resource indicator was developed using population, personal income, total federal taxes, and the total number of doctoral scientists and engineers in the states studied to project what each state should have generated. This measure suggests that Michigan received only 32 percent of its predicted award, lowest among the industrial states measured. Conversely, California received 87 percent more than its predicted amount and Massachusetts received 140 percent more.

This disadvantage is especially important when the condition of the state's research facilities are examined. The institutions frequently argue that their laboratories are not adequately equipped to conduct the frontier research that can have business--producing technological spinoffs. The federal funding disadvantage certainly prevents needed equipment purchases.

It is also important to recognize the role higher education institutions can play in urban revitalization. A vigorous academic presence helps form the clustering of people that is necessary for a good quality of urban life. It attracts the commercial and housing investment required for stable and attractive neighborhoods. An urban studies program contributes by providing the theoretical and empirical basis for public policy.

Image of Michigan's Economy

It has also been suggested that the state's national image inhibits economic development. Michigan has been portrayed as a declining industrial state that has been forced to reduce the quality of its research universities. Unless this image is modified, Michigan is unlikely to attract innovative, new industries.

ISSUES FOR FURTHER INVESTIGATION

Therefore, in considering these issues, the Commission will explore recommendations in the following areas:

1. Ways in which the linkages between higher education and both the private and governmental communities can be facilitated and strengthened. This exploration will include ways to

facilitate both an academic program/employer-needs dialogue, and a transfer of research results into viable commercial technology and products.

2. Ways that facility, equipment and human resource needs should be addressed to maintain excellence in research for emerging technologies and to assess obstacles to increased federal research support.

3. Ways in which international programming can be strengthened.

4. Ways in which the job training and retraining needs of government and the private sector can be better satisfied through the postsecondary education system.

5. Ways in which urban revitalization can be aided through the activites of academic institutions.

FINANCE AND CAPITAL OUTLAY

Introduction

This section offers a perspective on the balance sheet realities facing higher education. On the revenue side, the material discusses appropriations, tuition rates and state funding practices. On the expenditure side, material focuses on three cost categories: facility maintenance, major equipment and new facilities.

FINDINGS: GENERAL OPERATIONS REVENUES

When measured in constant dollars over the period 1978-9 to 1982-3, state aid to both public community colleges and colleges and universities has declined, while aid to nonpublic institutions and students has increased slightly. National comparisons show that the percent change in Michigan appropriations for higher education stands at or near the bottom of 50-state rankings.

As the following tables show, in both the college and university and community college sectors, the state-financed portion of institutional general operating budgets has declined. A part of the college and university financing burden has shifted to the student; for community colleges, students and local governments are carrying more financial responsibility. Table 1 displays revenues for both sectors.

Table 1
REVENUES
(Constant Dollars,* Dollars in Millions)

	1978-9		1982-3		
	Revenue	Percent of Total	Revenue	Percent of Total	Percent Change
Colleges and Universities:					
State	$563.6	65.5	$439.5	57.6	(22.0)
Fees	237.6	27.6	273.6	35.9	15.2
Other	59.4	6.9	49.7	6.5	(16.3)
Total	$860.6		$762.8		(11.4)
Community Colleges:					
State	$119.2	47.3	$ 91.4	36.1	(23.3)
Fees	60.3	23.9	82.5	32.6	36.8
Local	59.7	23.7	66.9	26.4	12.1
Other	12.8	5.1	12.2	4.8	(4.7)
Total	$252.0		$253.0		.4

*Higher Education Price Index, 1978-9 = 216.9, 1982-3 = 308.6

In both sectors, state aid declined over 20 percent, while student fees and local revenues increased. Combined, these changes produced constant total funding for community colleges and an 11 percent reduction for colleges and universities.

When measured on a per-fiscal year equated student (FYES)/basis, however, both sectors have suffered revenue losses. As Table 2 shows, per FYES total revenue has declined in both sectors.

Table 2
REVENUE COMPARISON PER FYES TOTAL REVENUE

	1978-79	1982-83	Percent Change
Community Colleges	$2,376	$2,018	(15.1)
Colleges and Universities	4,273	3,913	(8.6)

State appropriations for independent colleges and their students over the same period in constant dollars increased 6.4 percent, from $25.6 million to $27.3 million.

One consequence of this shift to student fees as a revenue source is a tuition rate level that exceeds that of many other states. Table 3 lists average annual tuition and fees charged by institutions in a variety of states. The table demonstrates that public collages and universities in Michigan tend to charge comparatively high rates, while community college rates appear to be about average.

Table 3

COMPARISON OF AVERAGE STUDENT FEES--1982-3
Public Institutions[1]

	Four-year		Two-year	
	Rate	Rank	Rate	Rank
California	$692	9	$ 56	10
Illinois	1,110	6	529	8
Indiana	1,184	4	977	3
Iowa	1,023	8	713	6
Michigan	1,424	2	716	5
Minnesota	1,135	5	869	4
New York	1,216	3	1,036	2
Ohio	1,512	1	1,161	1
Texas	396	10	255	9
Wisconsin	1,027	7	647	7

[1]Basic Student Charges, 1982-83, National Center for Education Statistics.

Michigan is ranked very low in state apropriations for higher education when its 1983-84 appropriations are measured against 1973-74 and 1981-82 appropriations. The annual comparison of state appropriations published in The Chronicle of Higher Education indicates that Michigan ranks at the bottom in percent change in appropriations. However, it should not be overlooked that Michigan still ranks seventh in absolute dollars appropriated for higher education.

Table 4
COMPARISON: FUNDING CHANGES OVER TIME
1983-4 APPROPRIATIONS

	2-Year Change	Rank	10-Year Change	Rank
National Average	+12%		+173%	
Michigan	+ 5%	44th	+ 91%	50th

The management difficulties caused by the real-dollar decline in state funding in the early 1980s were exacerbated by the instability of state appropriations. The original appropriations for colleges and universities were reduced a total of seven times by Executive Order reductions.

In conclusion, it should be noted that Governor Blanchard's 1984-5 funding recommendations for higher education have served to stabilize and to arrest the decline in state support. Again, when measured in constant 1978-9 dollars, (using a projected index) the Governor's FY 85 recommendations restore nearly one-half of the aid lost during the period of constrained financing which occurred in the early 1980s. In constant dollars, the Governor is recommending $488.8 million for colleges and universities and $99.7 million for community colleges. Respectively, these recommended amounts represent declines from 1978-9 levels of 13.3 percent and 16.4 percent, considerably less than the 22.0 percent and 23.3 percent declines experienced in 1982-3.

FINDINGS: DISTRIBUTION OF STATE REVENUES

The current method of distributing state aid to individual public colleges and universities and community colleges fails to account for enrollment changes, differences in program costs, and different educational roles. Even though the college and university annual appropriation act states, "The appropriations made in this act are based upon a legislative model for determining the financial needs of higher education," state aid has varied only modestly from simple across-the-board increases or decreases. Tables 5 and 6 compare the percent changes in final annual appropriations; i.e., original appropriations, plus supplemental appropriations, less Executive Order reductions, in both the four-year and two-year sectors for FY 79 through the FY 85 recommendation.

Table 5
PERCENT CHANGE--COLLEGE AND UNIVERSITY
ANNUAL APPROPRIATIONS AND FY 85 RECOMMENDATION

	FY79	FY80	FY81	FY82	FY83	FY84	FY85*
CMU	13.0%	7.9%	(7.8)%	(7.2)%	40.3%	(4.3)%	6.0%
EMU	12.9	7.9	(7.5)	(9.1)	40.6	(4.3)	6.0
FSC	13.6	8.0	(7.1)	(7.1)	40.4	(4.1)	6.0
GVSC	12.2	8.1	(7.7)	(9.5)	40.8	(4.6)	6.0
LSSC	15.7	7.2	(4.7)	(10.2)	40.8	(4.6)	6.0
MSU	10.2	8.3	(8.4)	(9.4)	40.5	(3.6)	6.0
MTU	13.4	8.2	(4.7)	(8.8)	40.8	(3.8)	6.0
NMU	13.2	8.0	(5.0)	(8.8)	40.1	(4.1)	6.0
OU	15.7	7.9	(7.1)	(8.7)	40.3	(4.2)	6.0
SUSC	17.2	6.7	(4.9)	(7.7)	40.6	(4.2)	6.0
UM-A	19.2	8.2	(7.3)	(9.3)	40.3	(3.7)	6.0
UM-D	11.2	8.1	(6.1)	(9.7)	40.8	(4.2)	6.0
UM-F	12.9	7.9	(8.2)	(9.2)	40.6	(4.2)	6.0
WSU	10.9	7.0	(7.9)	(2.8)	26.5	1.8	6.0
WMU	12.1	7.9	(7.9)	(9.5)	40.4	(4.2)	6.0

*The FY 85 Executive Recommendation guarantees a 6 percent increase, but up to an additional 4 percent would be awarded to those institutions which do not raise tuition. Those that do would receive only a portion of the 5 percent.

Table 6
PERCENT CHANGE--COMMUNITY COLLEGES
ANNUAL APPROPRIATIONS AND FY 85 RECOMMENDATION

	FY79	FY80	FY81	FY82	FY83	FY84	FY35
Alpena	14.4	7.9	(11.2)	4.6	8.5	7.5	10.0
Bay de Noc	15.6	8.9	(10.2)	5.5	8.7	7.5	10.0
C. S. Mott	5.1	8.9	(11.2)	4.5	8.7	7.5	10.0
Delta	11.3	10.7	(9.9)	4.6	8.7	7.5	10.0
Glen Oaks	18.6	7.6	(10.6)	4.8	8.4	7.5	10.0
Gogebic	14.7	7.4	(11.7)	4.1	8.6	7.5	10.0
Grand Rapids	13.4	11.0	(10.2)	4.5	8.6	7.5	10.0
Henry Ford	14.7	10.4	(11.5)	2.5	8.6	7.5	10.0
Highland Park	4.9	6.4	(11.3)	4.1	8.5	7.5	10.0
Jackson	14.7	10.5	(9.5)	4.0	8.5	7.5	10.0
Kalamazoo	8.1	8.4	(11.3)	4.3	8.6	7.5	10.0
Kellogg	14.0	9.1	(9.1)	5.0	8.5	7.5	10.0
Kirtland	9.6	6.4	(11.3)	4.4	8.6	7.5	10.0
Lake Michigan	12.3	7.7	(10.4)	4.3	8.5	7.5	10.0
Lansing	10.6	8.6	(10.5)	4.0	8.6	7.5	10.0
Macomb	10.0	7.6	(11.0)	3.8	8.5	7.5	10.0
Mid Michigan	14.9	6.4	(10.6)	5.3	8.6	7.5	10.0
Monroe	14.3	7.7	(12.4)	1.3	8.8	7.5	10.0
Montcalm	10.5	8.3	(9.1)	2.6	8.6	7.5	10.0
Muskegon	8.1	7.5	(11.4)	3.4	8.7	7.5	10.0
North Central	14.6	7.4	(11.1)	4.4	8.6	7.5	10.0
Northwestern	15.8	15.7	(9.2)	3.5	8.6	7.5	10.0
Oakland	7.0	8.0	(10.1)	1.0	8.7	7.5	10.0
St. Clair	15.8	8.2	(10.6)	2.5	8.6	7.5	10.0
Schoolcraft	11.4	7.6	(10.9)	1.1	8.7	7.5	10.0
Southwestern	13.8	11.0	(10.5)	3.9	8.6	7.5	10.0
Washtenaw	10.9	9.8	(9.7)	2.0	8.6	7.5	10.0
Wayne	7.6	8.2	(9.3)	4.4	8.6	7.5	10.0
West Shore	14.6	6.4	(11.3)	4.9	8.6	7.5	10.0

The annual range of change is fairly uniform in both sectors with the exception of appropriations to Wayne State University during the years in which numerous Executive Orders were issued.[2]

This across-the-board distribution of state aid has a number of negative consequences. Non-cost based distributions fail to recognize that institutional costs do not increase uniformly. Costs are related to enrollments, but aid has not been adjusted for changes in enrollment. For example, in FY 84, changes in the number of fiscal year equated students ranged from a 5.2

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[2]Executive Order 1982-4 was issued in the last quarter of the state's 1981-2 fiscal year and restored in the first quarter of 1982-3. These actions occurred within the 1982-3 fiscal year for all institutions except Wayne, which uses the same fiscal year as the state. Wayne, accordingly, was excused from this cash-flow management action and, as a result, its percent change differs significantly from the other institutions.

percent reduction to an 11.7 percent increase. Nevertheless, state aid--excluding the appropriation to Wayne State University--varied less than one percent.

Actual program costs also vary significantly from institution to institution, but aid is not adjusted to reflect this difference or to encourage cost reductions. As an example, in 1981-2 it cost Michigan State University $47 to deliver one student credit hour of undergraduate mathematics instruction; it cost Oakland only $22. Similarly, the mix of programs offered by the institutions has changed over time, but these changes have not been reflected in the aid distribution. While all institutions have tended to expand their business, science and technology curriculums and contract their education and other social science courses, these program shifts have not been uniform.

Finally, in addition to its failure to correlate the distribution of state aid with the distribution of costs, incrementalism fails to recognize differences in institutional roles and missions or to encourage the implementation of state goals.

FINDINGS: PHYSICAL PLANT DEMANDS

Facility Maintenance

There is considerable information to indicate that institutions have deferred facility maintenance projects. Problems related to maintenance appear to have been caused by institutional business practices, state funding reductions, and a tendency by both the institutions and the state to place a higher priority on new construction than on maintenance. The size of the deferred maintenance problem, however, has not been independently validated.

The Presidents' Council of State Colleges and Universites recently argued that budget restrictions have resulted in inadequate physical plant maintenance and, "If no state action is taken, buildings will be lost." In a survey conducted by the Department of Management and Budget (DMB) in early 1983, higher education institutions identified $125 million in deferred maintenance needs. While the Presidents' Council is updating the DMB survey, an independent verification of the reported backlog is not available.

The Office of the Auditor General has examined physical plant funds at a number of institutions. A review of these audits reveals: (1) inadequate funds are expended on facility maintenance; (2) maintenance projects tend to be financed from whatever general fund surplus remains at the end of the fiscal year; and (3) available restricted sources of financing are not utilized to finance maintenance.

These audits suggest that a more disciplined approach would help to alleviate the problem. For example, contributing a

legitimate portion of the indirect administrative overhead revenue earned from sponsored research to a facility depreciation or maintenance fund would provide a large source of building maintenance and replacement financing.

In the past, the majority of requests for capital outlay funds have been for new construction projects rather than maintenance or facility renovation. Similarly, most state capital outlay funds have been for new construction. While recent requests and appropriations have emphasized maintenance and renovation, a very large portion of available funds are still dedicated to new construction.

Major Equipment

Similar to the maintenance problem, the magnitude of the equipment problem is unvalidated. Unlike maintenance, however, a comprehensive inventory of equipment demand has not been compiled. While only one survey of equipment demand is available--a $78 million inventory of engineering equipment requests compiled by the Michigan Society of Professional Engineers--another indicator of the magnitude of the system's demand for new equipment is the total equipment special funding requests submitted as part of the Executive Budget development process. A total of $28 million in equipment requests were submitted in FY 1985, the largest single category of special funding requests.

Another indication of the seriousness of the equipment problem is provided by national studies. A recent analysis of 16 university (including The University of Michigan), 6 governmental and 9 commercial laboratories found that the median age of university laboratory equipment is twice that of commercial facilities. The study observed, "As a result, many university researchers work with inadequate tools that impair the pace of research, force closure of lines of inquiry, strain operations and maintenance budgets, and compromise the advanced education of graduate students . . . . The best equipped industrial laboratories surpass almost all university laboratories visited. . . . The ivory towers are now in industry."[3]

Major equipment acquistion is not routinely funded in the capital outlay or operating appropriations acts. While the state typically equips the facilities it constructs, this is only one-time financing. New equipment purchases, or equipment replacement, must be financed by general operating funds or restricted sources of financing obtained by the institution.

Given the above, and the observations that equipment is becoming more important to an expanding number of programs, and the rate

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[3]The Scientific Instrumentation Needs of Research Universities, Washington, D. C.: Association of American Universities, 1980.

at which sophisticated equipment becomes obsolete, it seems reasonable to conclude all Michigan higher education institutions are encountering difficulty obtaining equipment. Before this problem can be addressed, however, a validated inventory of need must be compiled.

New Facilities

Since the state has committed itself to financing its share of one-quarter of the higher education system's current capital outlay demands, it is unrealistic to expect that adequate resources will be available to build much of the remaining three-quarters. Also, since enrollments are likely to decline 10 percent, the need for new construction--especially traditional classroom space--is very limited. It seems likely that more efficient use of the existing plysical plant, coupled with a few carefully screened economic development related new building projects, will suffice in meeting the system's facility needs.

Michigan's four-year public colleges and universities operate a physical plant that they estimate has a replacement value of $4.6 billion; the community college system estimates the replacement value of its physical plant at $900 million. As Table 7 shows, institutions have requested funding to replace or renovate a significant portion of their capital assets.

Table 7
SUMMARY OF FISCAL YEAR 1985
HIGHER EDUCATION CAPITAL OUTLAY REQUESTS
(Dollars in Millions)

	Colleges and Universities	Community Colleges
Lump Sum Maintenance.	$ 27.2	
Projects in Planning		
Early.	479.7	$ 68.6
Authorized by Legislature. .	468.3	53.9
Projects in Construction.	385.0	
Total Cost.	$1,360.2	$122.5
Requested Sources of Financing		
State General Fund	$ 991.0	$ 53.3
State Building Authority . .	221.1	
Other.	148.1	69.2

Of the nearly $1.5 billion in capital outlay funding requests generated by the system, $385 million, over 25 percent of the total, is already in various stages of construction. Completion of these projects alone will require an additional $31.5 million

from the state general fund and will consume the balance of funds available from the State Building Authority.

The frequency of use of existing facilities suggests that the efficiency of the system can be increased. In a number of recent reviews, the Auditor General determined that some institutions do not fully utilize their classroom and laboratory space. In audits covering one-half of the public college and university system, average per-week laboratory utilization ranged from only 12.3 hours to 22.0 hours and classroom use varied from 20.2 hours to 35.9 hours. It seems appropriate to join the Auditor General in questioning the need for new classroom and laboratory construction at institutions which do not efficiently utilize existing space.

Efficiency can be increased--and new construction costs reduced--through facility conversion and even shared facilities. As the Higher Education Capital Investment Advisory Commission, chaired by William Agee, concluded in its 1980 report, "Sufficient physical capacity probably exists for higher education, but it is geared improperly to meet future needs." Underutilized classroom and laboratory space, like that identified by the Auditor General, should be converted to house high-demand programs before new construction occurs. Similarly, in geographic areas where one sector or institution has underutilized capacity, that capacity should be shared with all area institutions that require additional space or equipment.

ISSUES FOR FURTHER INVESTIGATION

The Commission will explore recommendations in the following areas:

1. Techniques to provide objective data and recommendations regarding levels of support needed by individual Michigan public colleges and universities in four areas: general fund, capital outlay, maintenance and equipment.

2. Techniques to relate funding recommendations to relevant measures of institutional role and mission, program supply and demand needs and enrollment projections.

3. Creative techniques to leverage greater private and federal investments in these areas.

The roles and missions of Michigan's higher education institutions have evolved over more than a century and a half of expansion. Each institution and each sector has assumed a wide spectrum of functions in serving the people of Michigan, the nation and the world. As Michigan moves toward the 21st century, rapidly shifting needs for instruction and training, research and economic growth, combined with continued revenue restrictions, changing demographics and enrollment reductions make it imperative that institutions respond by reassessing their respective roles.

Background

Although a state-supported university was proposed as early as 1817, 1830 to 1850 was the first real period of growth in Michigan's postsecondary system. The University of Michigan, founded in 1837, was the first public university in the state. Begun as a liberal arts institution, it rapidly expanded to provide professional training as the study of medicine and other disciplines became increasingly formalized.

Michigan's tradition of private education began with the establishment of such institutions as Kalamazoo College (1838), Olivet (1848), Hillsdale (1850), and Adrian (1859), as various denominations founded institutions to meet both needs for trained personnel and to expand available educational opportunities. These private institutions received formal degree-granting authority from the state in 1858.

A need for professionally trained teachers to staff the expanding public school system led to the establishment of Normal schools, that is, teacher training colleges, throughout the state. Eastern Michigan was founded in 1853 and, in the period 1898-1901, Central Michigan, Western Michigan, and Northern Michigan followed. These institutions have diversified their offerings, with the goals of making a wide range of programs easily accessible to students throughout the state.

A need for technical training (reflected in the passage of the 1863 Morrill Act, providing federal assistance for the establishment of land-grant colleges throughout the nation) led to the development of Michigan Agricultural College, founded in 1855, into an institution providing training in the sciences necessary for the 19th century revolution in both farming and industry. The establishment of Michigan Technological College in 1885 responded to the need for mining and engineering training required by Michigan's developing industries. Postsecondary education's response to the educational needs of business and industry has continued to the present.

Although women were admitted to private institutions and to the State Normal School before the Civil War, it was not until

1870 that The University of Michigan and Michigan Agricultural College (now Michigan State University) admitted women to their programs. These changes reflected national trends toward expanding educational opportunities to women.

The establishment of the junior college system in the early 20th century further increased available educational opportunities. Grand Rapids Junior College was founded in 1914. In 1917 the Michigan Legislature passed legislation permitting school districts with populations greater than 30,000 to found junior colleges in their districts. Reflecting the increasing urbanization of American society, an urban university, Wayne State, was created in 1933 through the consolidation of several existing Detroit institutions.

The postwar period was a time of immense expansion in the post-secondary educational enterprise, both in Michigan and throughout the nation. It was a time of population growth, a time of economic expansion requiring new training programs to respond to the development of new technology, and a time of increasing federal involvement in the financing of higher education, starting with the provision of educational benefits for the veterans returning from World War II.

Societal expectations concerning college attendance also continued to change. No longer was a college education considered a privilege reserved for a small proportion of the population. Postsecondary education was now seen as a natural stage in educational progression. A few numbers will serve to indicate the vast growth in enrollments: in 1950, 122,808 students were enrolled in postsecondary education in Michigan; in 1968, 349,410 students were enrolled in Michigan institutions--enrollments nearly tripled in less than 20 years.

This growth in enrollments caused a great push for expansion to accommodate the seemingly ever-increasing numbers of students. Much of the development took place in the community college sector, as the system was expanded from nine institutions in 1948 to twenty-eight institutions in 1965. Community colleges' expanded missions included: (1) provision of the first two years of college instruction, allowing for transfer to a four-year institution; (2) provision of vocational and technical training as preparation for entrance into the job market; and (3) offering of continuing educational opportunities, both with and without college credit.

Four-year institutions also increased in size of enrollments, actual numbers of institutions, and expanded graduate and research opportunities. Separate undergraduate institutions came into being at Allendale (Grand Valley), University Center (Saginaw Valley), Rochester (Oakland), Sault Sainte Marie (Lake Superior) and at branch campuses of The University of Michigan at Dearborn and Flint. Ferris became a state institution. The system of

proprietary schools (for-profit educational institutions with a trade/vocational emphasis) expanded as consumer demand for such employment-directed education grew.

As an alternative to avoid further expansion of public institutions to meet demand, various student financial aid programs for students attending private institutions were instituted. In addition to the state's increased role in funding, the federal role in funding education also increased through programs of direct aid to institutions (such as the Higher Education Facilities Act) and various student financial aid programs which established broad-based student financial aid programs comprised of both grants and loans.

Three special state commissions were also convened in the postwar period to study postsecondary education in Michigan. The recommendations of the Michigan Legislative Study Committee on Higher Education of 1958 set the stage for the expansion of Michigan's system of both four-year and community colleges. The Advisory Committee on University Branches (1964) and the Citizen's Committee on Higher Education (1965) concurred with the 1958 report, recommending expansion of the system, especially of the community college sector, and the need for provision of easily accessible four-year institutions throughout the state.

The past decade has been one of final growth and consolidation. Enrollments in the four-year sector peaked in the mid-1970s and, with the decline in the numbers of 18-22-year-olds making up the traditional pool of undergraduate students, enrollments have begun to decline in this sector. The growth of enrollments in the two-year sector has been attributed, in part, to the increased participation of non-traditional and part-time students, significantly affecting the composition and nature of their student pool.

Wayne County Community College was the last community college to be established in Michigan; recently, no new four-year public institutions have been created. Michigan's postsecondary system has now entered a time of stabilization, in contrast to the uninterrupted growth of the postwar years.

In summary, the present system evolved over time to serve differing needs. Its geographic and programmatic distribution reflects those earlier priorities. While the historical pattern of development must be acknowledged, future needs have become the most important considerations for defining roles and missions.

FINDINGS

The Commission agreed upon several deliberative guidelines in considering its charge to reevaluate institutional missions with a focus on Michigan's future needs:

- Clearly defined roles and missions should be developed for each public institution of higher education and should relate to the needs of the state as a whole.
- General fund, capital outlay, maintenance and equipment funding provisions should be objectively established in view of clearly defined institutional roles and missions.
- Strategic mechanisms should be developed to increase cooperation between individual higher education institutions and maximize utilization of the state's resources.
- The strength of Michigan's multifaceted system of public and private higher education institutions should be recognized and retained.
- Efforts should be made at both the state and institutional levels to broaden the base of support for Michigan's postsecondary education enterprise.

To begin the discussion on these points, the Commission engaged an experienced higher education consultant to review the role and mission statements of the four-year public institutions. Several observations resulted from this review: (1) current role and mission statements are intended primarily for internal planning and accreditation purposes and are not written from a systemwide perspective; (2) every role and mission statement addressed nearly similar goals for instruction, research and public service; and (3) there was more commonality than uniqueness among the various statements. In view of these findings, institutional role and mission statements apparently do not lend themselves to consideration of state goals and priorities. Thus, they are unlikely vehicles for considering policy questions such as statewide program distribution, resource sharing, funding formulas and capital outlay criteria. Rather, there is a need for the development of an alternative mechanism ot achieve such goals. A state classification framework or a taxonomy on institutions appears to be the most likey alterntive for providing this structure.

ISSUES FOR FURTHER CONSIDERATION

Therefore, in considering these issues, the Commission will explore recommendations in the following areas:

1. Techniques available to facilitate the development of distinct and clear institutional role and mission statements for public colleges and universities, as well as for each sector in the system. Such statements should not only help clarify specific focuses within the broad spectrum of undergraduate and graduate curricula, but should also identify which institutions and sectors should focus on areas such as job training, remedial adult education, engineering, life science research, graduate programs, teacher education liberal arts education and so on.

2. Techniques available to relate such precise role and mission statements to public funding, program development and retention decisions. Such techniques should help ensure that scarce public resources will be used in the most efficient manner possible to support quality higher education within the state.

3. Incentives available to facilitate the development of inter-institutional and intersectional cooperation within Michigan's higher education enterprise.

Section Three

SYSTEM ISSUES

SYSTEM ISSUES

The Commission, in reviewing the relevant data, discussing the key issues, and consulting with experts, concerned citizens and policy makers, has found that three common threads run throughout these deliberations. Regardless of the issue discussed, the same shortcomings to further planning for the future of a quality higher education system in Michigan were clear. Thus, the Commission intends to focus specific attention on these three critical concerns: (1) the development of a comprehensive statewide uniform database for higher education; (2) the need for an ongoing planning mechanism to develop recommendations for policy makers in achieving state goals and priorities in higher education and (3) the creation of a systematic procedure for downsizing the system, given the clear economic and demographic trends of the coming decade.

COMPREHENSIVE, STATEWIDE, UNIFORM DATABASE

During the review of background issues relative to the Commission's charge, it was apparent in many areas that there was a serious lack of basic data regarding Michigan's higher education enterprise. Although data was found in some areas, it existed throughout a variety of state agencies and institutions, including the Departments of Education, Labor, Management and Budget, Commerce, the House and Senate Fiscal Agencies and individual institutions. No central mechanism functioned to synthesize these resources, to establish a standard for collecting the data or to develop comprehensive recommendations based on this data for all higher education policy makers.

The Commission found no ongoing effort to collect and utilize data in such areas as enrollment projections, occupational supply and demand, cooperative programs, the representation and graduation levels of women, minorities, handicappers and older students, etc. While community colleges currently have the most extensive database, some expansion is still needed to meet the needs of policy makers. The feasibility of a uniform budgeting and accounting procedure for four-year institutions similar to that of the community colleges should also be considered.

The development of a comprehensive plan for implementing a uniform statewide database for all sectors, both public and private is critical. The Commission recommends that this be done expeditiously.

In order to achieve this goal, the Commission urges that a cooperative effort by the affected associations, agencies and departments begin immediately to develop plans for the implementation of a comprehensive database. It is the Commission's intention that once this plan is completed, the Department of Education should be the lead agency in implementing the plan. If in the

next six months it apears that a cooperative plan is not possible, the Commission will propose specific legislation to achieve this goal in its final recommendations.

FUTURE STATEWIDE PLANNING AND COORDINATION

The needs of Michigan and all her citizens must be the focus of all future planning efforts in higher education. This is a process that must be ongoing to keep the state's goals in the forefront. Only thrcugh such a coordinated effort can quality, cost-efficient education be guaranteed.

While many agencies and departments currently focus on higher education, each has assumed a specific responsibility that does not include the entire scope of concerns that must be addressed for the long term. Thus, the Commission finds it critical that a strategic mechanism be developed for working with all policy makers in higher education to achieve a systematic review of program and resource distribution. Such a mechanism would also be used to stimulate the development of cordinated efforts in such areas as technology, research, faculty development and exchange, cooperative programming, consortia and resource sharing. This would permit major policy concerns to be integrated into the annual appropriations process as well as institutional planning and governance.

In considering the need for planning and coordination, the Commission reviewed the recommendation of the Siedman Report (1974) for the creation by Constitutional amendment of a "Superboard." Such a board would have superceded the individual institutional governing boards. The Commission, however, found this recommendation to be neither politically practical nor administratively prudent.

Rather, the Commission recommends the development of a mechanism that would assist in coordinating the efforts of the governing boards, the legislature and the Executive branch. The Commission intends to develop comprehensive recommendations regarding roles and missions, funding formulas and policy criteria for capital outlay as well as the development of a comprehensive database. The Commission will develop a recommendation for planning and coordination through this effort. A strategic mechanism to preserve quality and target resources is absolutely necessary.

The support and vision of the members of the individual governing boards is also critical to planning coordination. Because the governing boards hold the final constitutional responsibility for each institution, it is essential that the most able Michigan citizens be available to serve. The National Association of Governing Boards' (AGB) Commission on College and University Trustee Selection has developed a series of recommendations for working with the appointing authorities and nominating conventions to expand the selection process. The AGB recommendations

merit consideration and will be reviewed by the Commission.

INSTITUTIONAL DOWNSIZING

Given likely future enrollment levels and undeniably scarce resources, it is clear to the Commission that the current configuration of the Michigan higher education institutions and program offerings cannot be sustained at today's levels. Attempting to maintain the status quo will only result in continued dispersion of resources and the erosion of quality. Thus, better targeting of available resources is the only alternative. It is clear we must downsize the system. After reviewing the options, the Commission finds three levels of activity appropriate ot consider:

1. **The current trend of program reductions, cooperative programming and internal budget reallocations should be supported at all state institutions in the short-run;**

2. **Models for regional administrative mergers, resource sharing, consortia, more expansive cooperative programming and technological delivery systems combined with clearly defined roles and missions should be actively pursued for the medium term;**

3. **In the long run, institutional closings may be necessary. In making this last statement, the Commission wishes to stress that it is not enthusiastic about downsizing through the closing of colleges and universities. Nor does the Commission have recommendations for closing specific institutions. Rather it finds it is so critical to better focus scarce resources that it may not be possible to foreclose this option for the balance of the century.**

Therefore, to facilitate discussion of this point, the Commission will develop criteria for defining when reduced enrollments and program resources make a given institution or program unable to sustain the quality requisite for a Michigan institution.

Conclusion

The people of Michigan deserve an assurance that the state's resources are being utilized effectively to maintain the best possible system.

A thorough discussion of the entire agenda profiled in this report is necessary to achieve this objective. Such a discussion can only be accomplished if those concerned about the system set aside their parochial interests and consider the purposes of higher education for all the people of this state. Working

together, a consensus can be developed to chart the way to the 21st century for one of Michigan's most valuable resources. Our great state and our people deserve nothing less.

APPENDIX

GOVERNOR'S COMMISSION ON THE FUTURE OF HIGHER EDUCATION

James K. Robinson, Chairman

Attorney, Honigman, Miller, Schwartz, and Cohn. Adjunct professor, Wayne State University Law School. Former United States Attorney, Eastern District (Michigan). Distinguished Alumni Award, WSU Law School, 1979. Chairman, Michigan Supreme Court's Committee on Rules of Evidence. Chairman, Friends of Legal Aid. President-elect, National Association of U. S. Attorneys. Delegate, U. S. Court of Appeals, Sixth Circuit Judicial Conference, 1981-1983.

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Physician. Commissioner, Mayor's Emergency Food Relief Committee and Health Advisory Commission, Detroit, 1982. Clinical assistant professor, Wayne State University School of Medicine. Honorary doctorate, Central Michigan University, 1983. Active on committees at Detroit Memorial, Hutzel, and University of Michigan hospitals. Board of Directors, Michigan Cancer Foundation and Detroit Symphony Orchestra. Mayor's delegate, World Energy Conference, 1974.

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Dr. James W. Miller

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President, Southfield City Council. Real estate developer. Involved in building and managing apartment buildings. Past member, Lafayette Clinic Institutional Review Committee. Former teacher in Detroit Public Schools. Board of Directors, Lycee International. Board member, Picolo Opera Company. Active in numerous civic organizations, including the Chamber Music Society of Detroit and the Detroit Symphony Orchestra.

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Charles F. Porter

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Philip H. Power

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Dr. Phillip E. Runkel

State Superintendent of Public Instruction. Former superintendent, American Community Schools of Athens, Inc., Athens, Greece. Superintendent, Grand Rapids Public Schools, 1970-1978. Former teacher and principal. Distinguished Alumni Award, Michigan State University College of Education, 1983. Numerous other awards and four honorary doctorates.

Dr. Gumecindo Salas

President, State Board of Education. Director of Minority Programs Division, Michigan State University Department of Human Relations. Former counselor, teacher, professor. Numerous awards, including Spirit of Detroit Award from Detroit City Council, 1983. Participant in White House briefings and conferences.

Stanley J. Winkelman

Board Chairman and Chief Executive Officer, Winkelman Stores, Inc. President, Metropolitan Affairs Corporation. Board of Directors for New Detroit, Inc., the United Foundation, Economic Alliance for Michigan, Economic Growth Corporation of Detroit, Detroit Renaissance, Inc., Economic Club of Detroit, and the Jewish Welfare Federation. Co-chairman, Mayor's Emergency Relief Committee, 1983. Recipient of numerous awards.

GOVERNOR'S COMMISSION ON THE FUTURE OF HIGHER EDUCATION STAFF

Dr. Patricia R. Widmayer, Executive Director

Formerly, Director of Policy, Office of the Governor; Director of Legislation and School Law, State Department of Education; district staff director for United States Congressman; research analyst for Office of the Speaker, Michigan House of Representatives; instructor, Oakland University; and high school teacher.

L. Annette Abrams, Associate Director

On leave as Director of Michigan Department of Mental Health Office of Intergovernmental Relations and Affirmative Action; also was legislative policy analyst for Michigan State Senate; administrator for several federal drug abuse projects; served on staff of U. S. Senator.

Dr. Dwight Lee Peterson, Associate Director

Also supervisor for Information Services, Student Financial Assistance, Michigan Department of Education, responsible for development of statewide financial aid information packages, administering degree reimbursement program for private colleges. Formerly consultant and administrator for university admission programs, grants, and scholarships.

Paul Reinhart, Associate Director

On leave as senior program budget analyst, Michigan Department of Management and Budget, with responsibility for development of annual budget recommendations for numerous departments and education programs including financial aids, community colleges and capital outlay; held other budget-related development jobs in state civil service.

Patricia (Tish) Tanski, Associate Director

On leave as Director of Budget Office, Michigan Department of Labor, responsible for development of a $174-million budget for a department with 1,000 people in 21 program areas; has served in various state and private agencies as a fiscal, legal and legislative analyst; former VISTA volunteer.

Dr. John F. Hanieski, Associate Director

On leave as chief economist, Michigan Department of Commerce. Member, Board of Directors, Michigan Industrial Developers Association; chairman, Detroit-Wayne County Port Authority; recently completed assignment as staff to Cabinet Council for Jobs and Economic Development.

Melinda Remer, Executive Assistant

Formerly policy analyst, Office of the Governor; worked with Department of Civil Rights on Federal Housing Anti-Discrimination Project; served as administrative assistant for Minority Leader, Michigan House of Representatives with responsibility for legislative proposals and departmental liaison.

William B. Castanier, Public Information Director

Also Director of Office of Public Affairs, Michigan Department of Labor; held various media positions, trade association and promotional management positions.

Rnea Lodge, Public Information Assistant

On leave as communications officer with Bureau of Employment and Training, Michigan Department of Labor, coordinating activities of several commissions and councils; held various print media positions; owned a public relations firm and affiliated with several others; director of public relations for Oakland University continuing education program.

Elizabeth Thompson, Doctoral Intern

Ph.D. candidate, Michigan State Universtiy. Former university instructor and student residence program administrator.

Jean Valley, Executive Secretary

On leave from Corporations and Securities Bureau, Department of Commerce. Formerly secretary in Governor's Office in the area of education and student financial aid in the State Department of Education; also secretary to Michigan Youth Corps.

Shirley Winters, Receptionist/Secretary

Formerly secretary for Northwest Suburban Aid for the Retarded, Park Ridge, Illinois. Clerical assistant, Park Ridge Public Library.

Special consultants have included:

Dr. Anthony Travis, Administrative Training Fellow, American Council on Education and Associate Professor, Grand Valley State College.

Margaret Cooke, Executive Director, Michigan Women's Commission.

Martha Bergsten, Office of Health and Medical Affairs, Michigan Department of Management and Budget.

STAFF BACKGROUND PAPERS

October, 1983

Profile of Michigan's Higher Education Institutions

November, 1983

Trends, Issues and Decisions Facing Michigan's Higher Education System

Postsecondary Enrollments: United States and Michigan

An Overview of Previous Michigan Higher Education Commissions

December, 1983

*Qualitative Reform of Public Schooling (K-12)

January, 1984

Occupational Supply and Demand and Postsecondary Education

Capital Outlay

February, 1984

Elements of Quality Associated with Bachelor and Associate Degree Programs in Michigan

Equal Access for Women and Handicappers in Higher Education

The Issues and Problems Regarding Financial Access to Higher Education in Michigan

A Summary of Other States' Higher Education Special Commission and Task Force Activities

March, 1984

Higher Education and Economic Development in Michigan

*Prepared for the Commission by Dr. Nanette Reynolds, Governor's Office